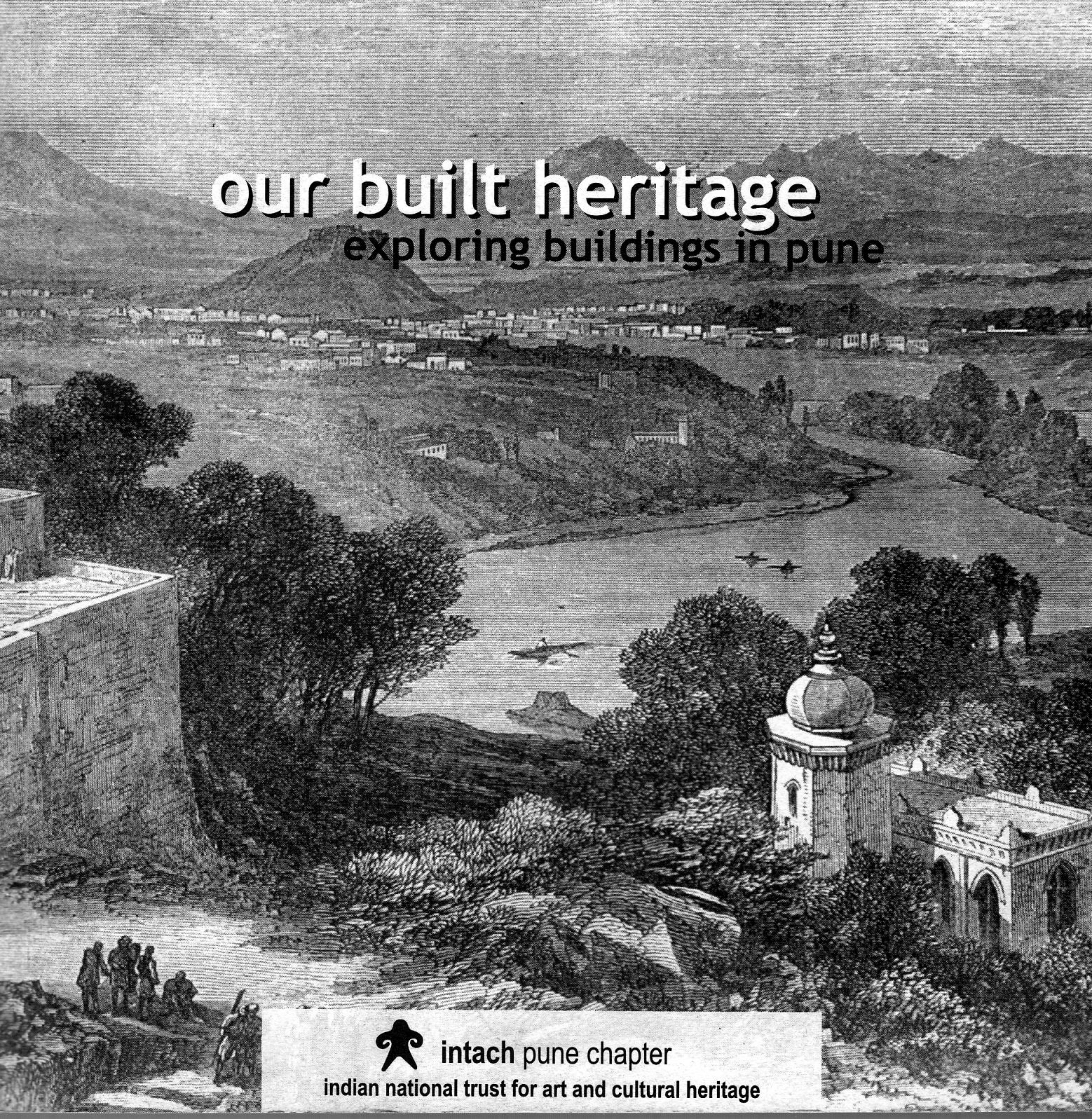




our built heritage

exploring buildings in pune



intach pune chapter
indian national trust for art and cultural heritage

our built heritage

exploring buildings in pune



intach pune chapter

indian national trust for art and cultural heritage

awareness programme 2002

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a note to the user •

- >> This booklet is meant to help educators guide children towards an understanding of urban architecture and to introduce the concept of its conservation.

The main objectives are

- > to understand the basic features or elements of architecture
- > to understand the factors that create architecture
- > to develop a critical appreciation of architecture

Primarily this book is meant for those teaching children in the age group of 9 to 12, but with some changes in the activities, it can be used with older students as well. Most of the examples described are from Pune city, but the booklet can be adapted to any other city by just changing the examples. The matter is divided into six sections with progressively more complex concepts ranging from simple definitions of parts to conservation/ preservation. We have suggested objectives and

activities at various intervals, but these are flexible. It is up to the teachers to make a time frame over the year, and add/subtract from the activities, since he/she knows the ability of the class best.

Each section can also be laterally related to other curriculum subjects like geometry, mathematics, science, history and geography. We have given some indications in the activities sections, but the teacher will be the best judge of how to make the connections.

The teacher may gradually have to build up their own leaflet files of anecdotes, quotes, pictures and news cuttings.

For us at INTACH Pune, this book is one dimension of our effort to create awareness about our heritage. As more ideas on 'how to' are developed, we will be publishing them on the website. Users of this book are also invited to share their experiences of exploring our built heritage, through letters or by email, which could be pooled on the website.

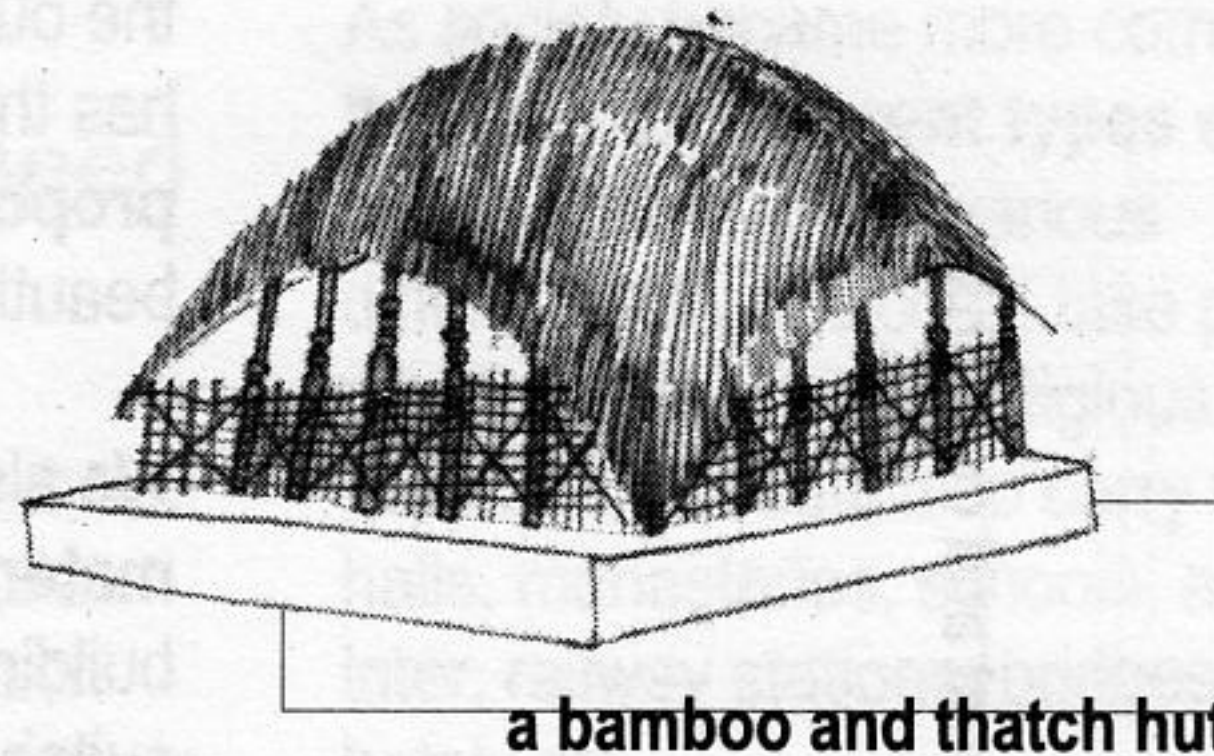
Log on to www.intach-pune.org
Email intach_pune@yahoo.com

• introduction

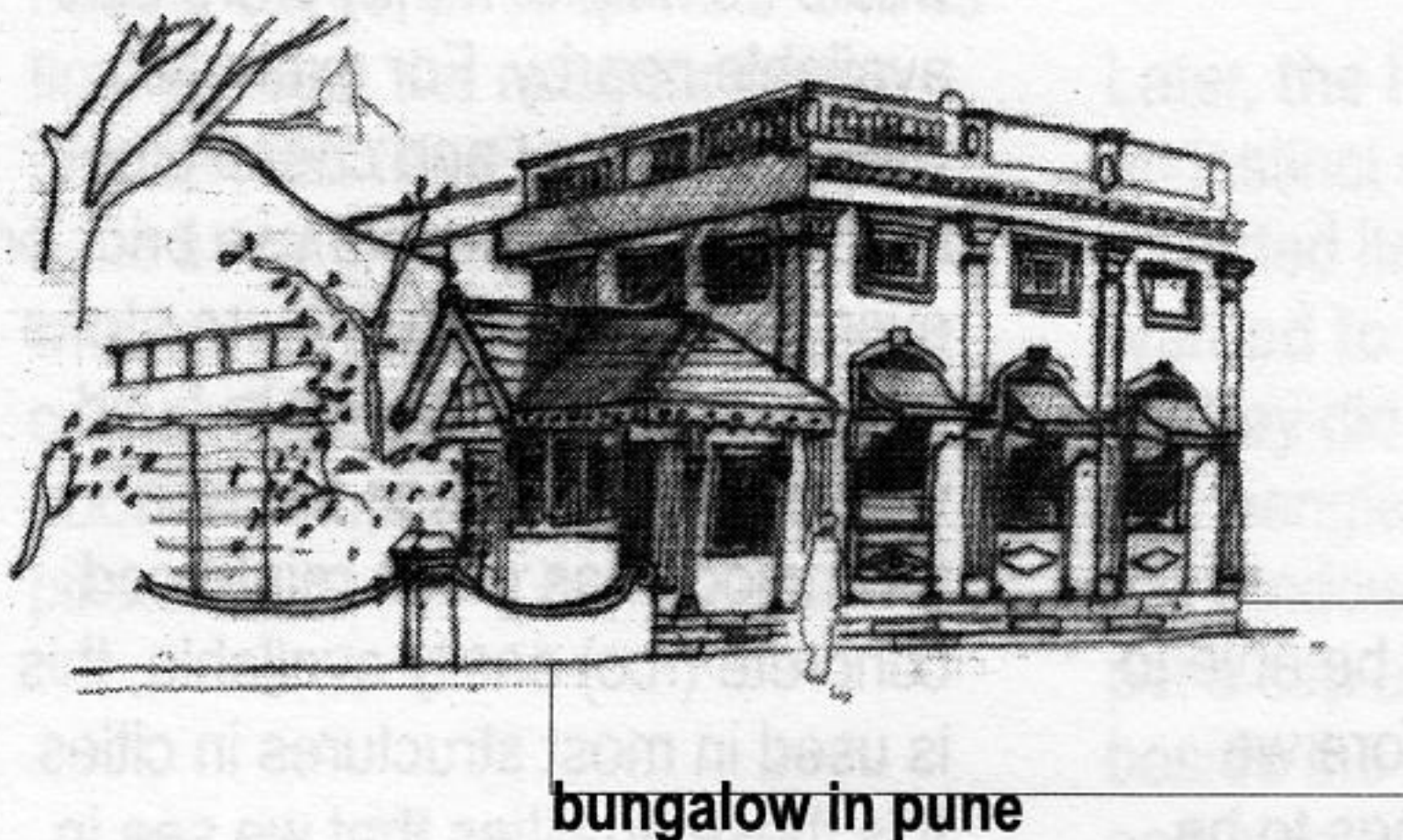
>> This is a booklet about the interesting buildings that we see around us everyday. We are so used to seeing them, that we usually fail to notice them. We cannot really miss looking at the trees on the roadside on the way to school. But have you noticed how the tree changes its looks each season? When does it lose its leaves and look all wood and stick like a skeleton in your biology laboratory? Have you ever looked at it after the rains, all dressed up in its new clothes of shiny green

leaves? That's when the birds come to the trees. We can appreciate trees, birds and butterflies and things like that if we know a little about them. Everyone loves nature, so we know more about it, but since we live in cities, the most common things we see around us are buildings. Do you also look at them with interest as you pass by? Like the trees and birds, we can understand and enjoy the buildings we see around us if we know a little about them first.

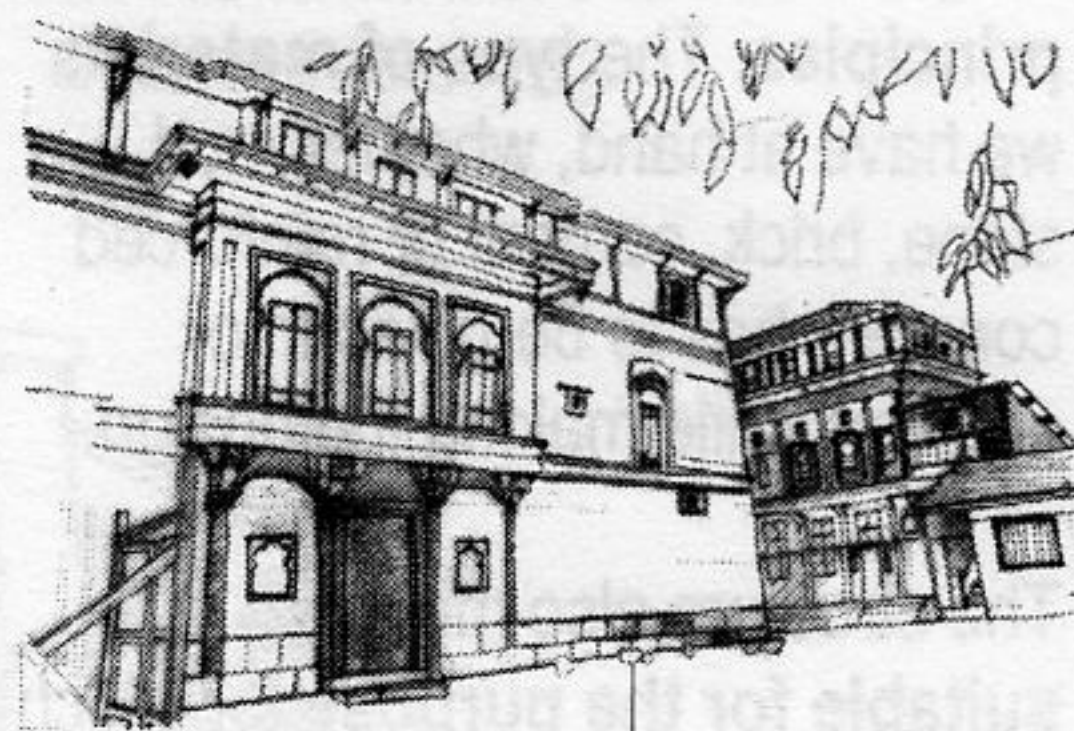
• what is architecture



a bamboo and thatch hut



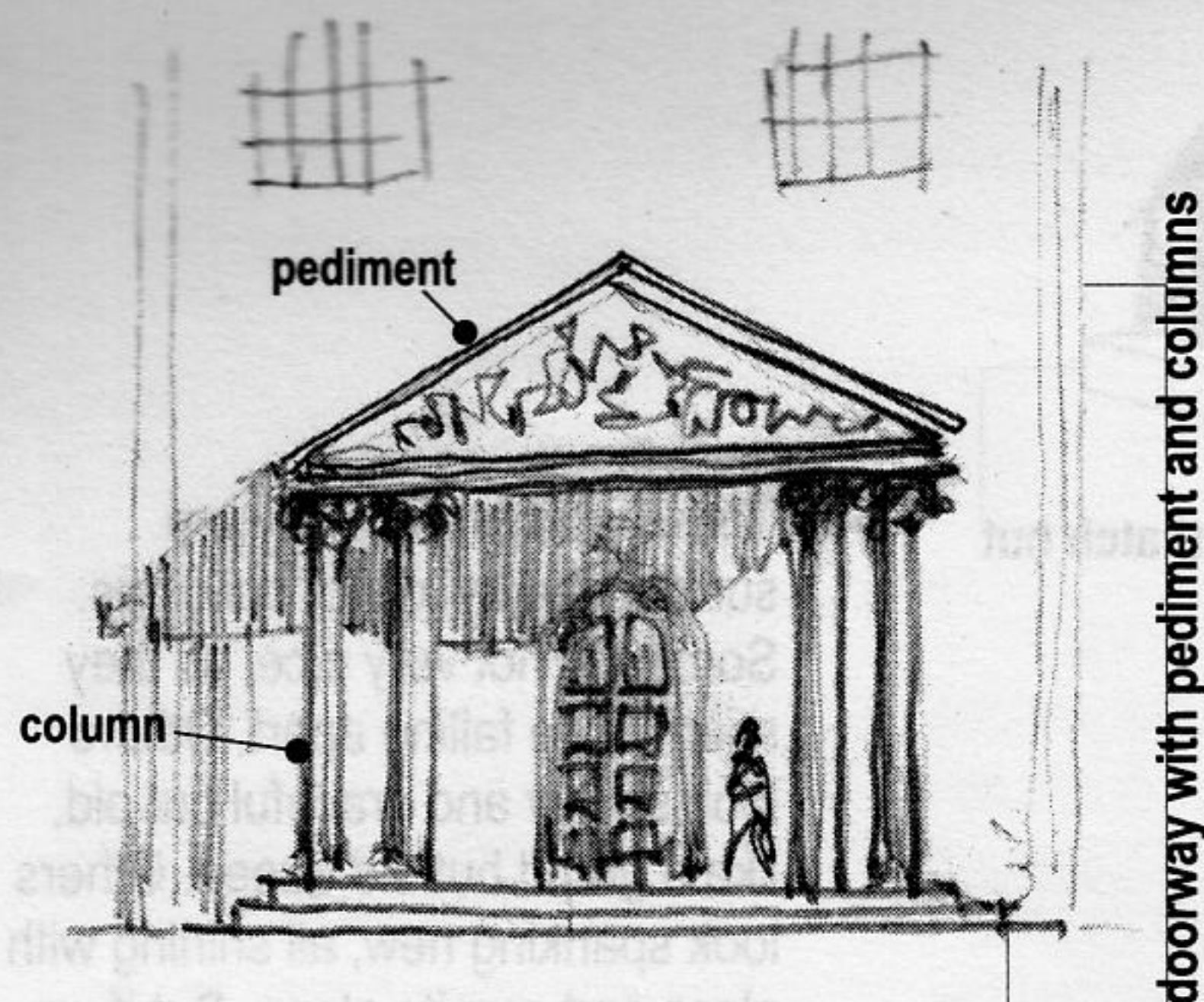
bungalow in pune



raste wada, pune

>> Those who live in a city are surrounded by lots of buildings. Some are not very nice, as they seem to be falling apart. Others look stately and graceful but old, like a grand but old queen. Others look spanking new, all shining with glass and granite stone. But if we know about buildings, we realize that the old saying, *all that glitters is not gold* is very true in the case of buildings. Not all new buildings are artistic, though some can be marvels of modern technology, and all old buildings are not remarkable. Sometimes we have

le corbusier, the famous architect who also designed the city of chandigarh, the new capital of punjab, after independence, once defined it thus, < architecture is the masterly, correct and magnificent play of volumes brought together in light >



to stand in front of an old building which looks broken down now, and try to imagine how wonderful it looked in its heyday, or in front of a very modern building and see if it is in tune with its surroundings. It is very difficult to define the word accurately, but we can try to explain what puts any structure in the category of architecture.

We generally use the word Architecture for the science and art of constructing and designing buildings. Though buildings must look **artistic or beautiful**, they also have to serve the purpose for which they are built. Since they are also

expensive, they should be able to last a long time. Therefore we usually want our buildings to be **strong**. So the design has to be based on **sound scientific principles**. The **type of materials** we have at hand, whether mud, stone, brick, cement or reinforced concrete has to be taken into account while making the design.

The structure also must be **suitable for the purpose** for which it is built. For example, it will be very inconvenient if a school was designed like a railway station, or a hospital like a home. No matter how much decoration is added to

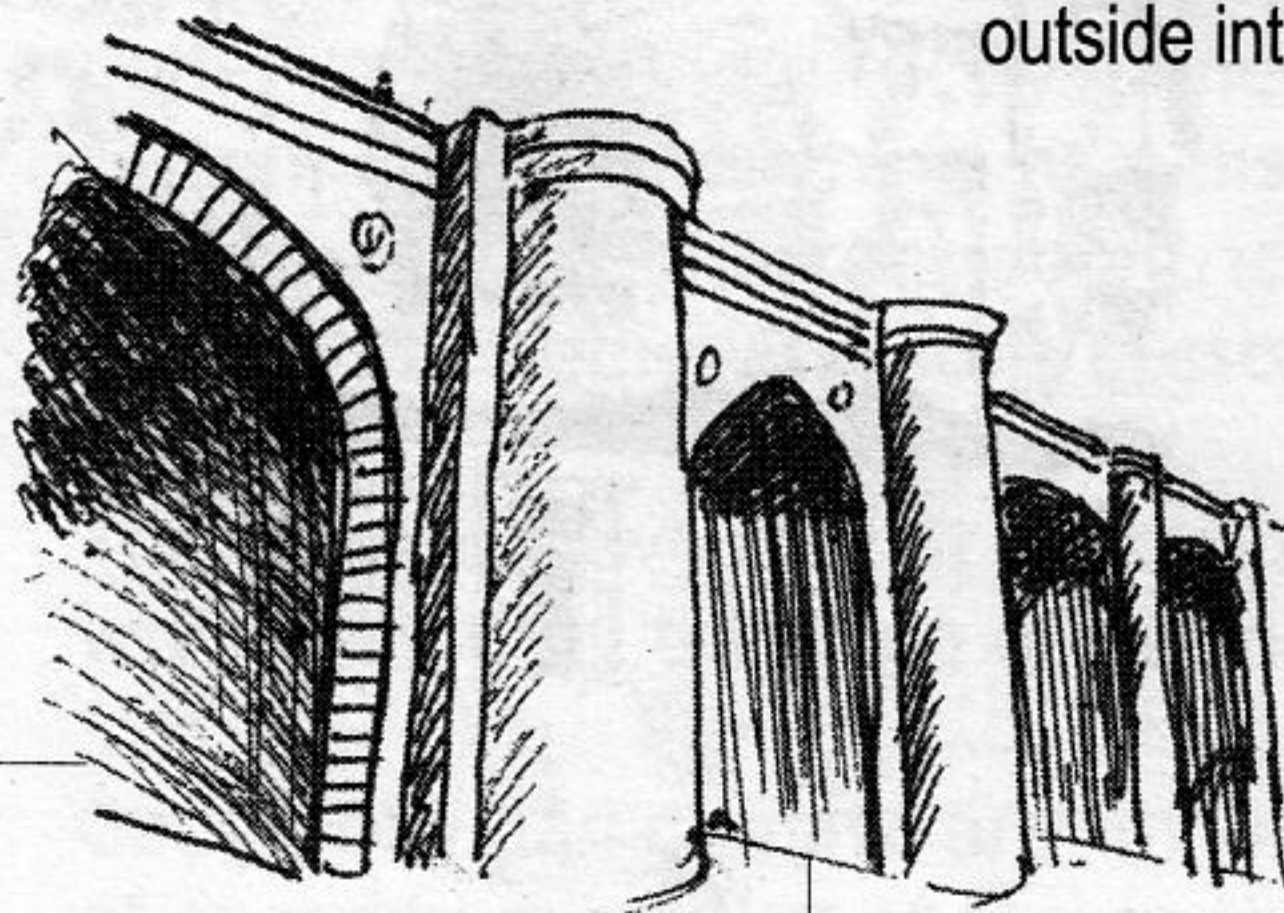
the outside of the building, unless it has the **stability and the correct proportions** it never really looks beautiful.

We also have to think of the **materials** being used to construct buildings. They should not only be suitable for the purpose but it would be helpful if they were also available nearby. For example, where abundant and cheap stone is not available, people use brick or even mud and wood. Where stone is plenty, it makes sense to build with stone. Now since modern technology has made reinforced concrete (rcc) easily available, this is used in most structures in cities. It is these qualities that we see in abundance in the best-known buildings of the world. Like for example, the Pyramids of Egypt, the Great Wall of China, the Parthenon in Greece, and the temples like Khajuraho, Konark, Meenakshi in India, and above all the Taj Mahal.

Those who are specially trained to design and create of such buildings are called **Architects**. You can see from our description of architecture, that it cannot be easy to be an architect!

>> why do we need architecture?

Everyone builds in a fashion, bees build, birds build, humans build. Early people did not need much architecture, as they lived mostly in natural caves, or straw huts. But as time passed, the need for better **shelter** was felt. People learnt to build **strong** walls of wood or stone with **solid roofs** to keep out the cold and the rain. They learnt about supporting these roofs on pillars.



chhatrapati shivaji pul, pune

As society became more complex, the need for **different types of structures** in which various different activities could take place was felt. We needed religious buildings, aqueducts to carry water, halls, monasteries, schools, and later, railway stations, bridges, hotels etc.

Later, **the love of beauty**, which is an instinct in human nature, asserted itself and then people **wanted to adorn** their houses, just as they did their bodies with beads and bangles. They would shape the window properly, and may be put a cap above it. They put pillars beside the door; they made arches and also added domes, turrets, towers and spires. Carvings were added to the walls to make the outside interesting.

>> things that influence architecture

- > scientific principles
- > available technology
- > purpose of the building
- > materials available
- > influence of climate
- > need for stability
- > culture and philosophy
- > society and its values
- > economy

architecture is the science and art of
designing and constructing buildings

>> culture and architecture

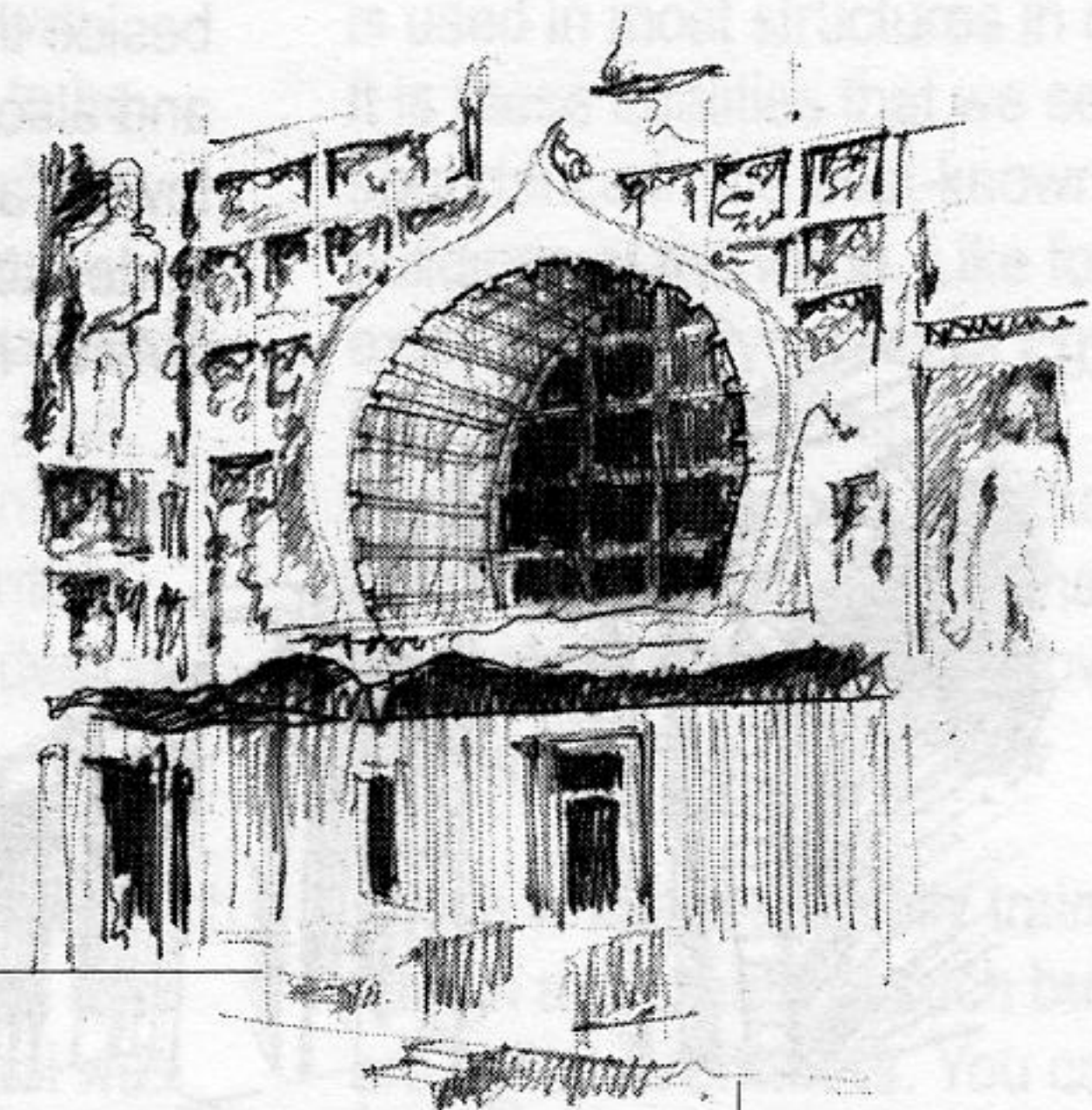
As people began to understand more scientific principles and invented better tools, (technology) their buildings became more and more elaborate. The buildings reflected their knowledge of construction principles at that time, and the kind of tools available, and the **economic base (resources/revenues)** of the people. Each group thought differently about the meaning that their most elaborate buildings should convey. They wanted these to reflect their view of life, especially in their religious structures. That is, **different cultures produced different types of architecture**. This was always based on the level of the **technology of the time, the materials** available as well as the 'world view' or **philosophy** of that culture.

By looking at the famous buildings of the past, we can decipher a lot about the people who built it. We

may not know the names or the exact costs and things like that after so many centuries, but we learn something about their philosophy, religion, level of technical knowledge and their economy. Thus historians have been able to learn so much about Egypt, Greece, China and our own country from the architecture that still remains from early times.

Our forefathers knew how to make even the caves where they had their monasteries, look wonderful. With nothing better than simple tools like hammer and chisel, they

carved whole rock faces into such wondrous designs that we have to marvel at them even today. In Bhaja and Karla, in the Manmeda caves near Junnar, and in Ajanta we see such artistic decorations of caves. When you go to Karla on a picnic next, you must look at the caves carefully.



facade of a hall cut from living rock with hammer and chisel

>> classroom discussions and activities

1. Children should be shown pictures of some world famous monuments, or they can bring a picture from home. They can try to think of scientific principles at work in these examples. Shapes of buildings, like cubes, triangles, arcs, rectangles and weight bearing capacity, gravity etc. can be related to mathematics lessons if these topics are in the curriculum, and/or have already been taught as concepts.
2. Meaning of proportion, symmetry, volume etc. can be easily demonstrated through the examples of these buildings. Students can then say/discuss why they think these are beautiful (or why not).
3. They can select any building in their own city that they find has all the attributes of architecture.
4. While talking about the training of architects, the teacher can explain that in earlier times when there were no modern architecture colleges, young students trained under masters and directly gained work experience. The guru-shishya or apprentice system can be brought in as a historical fact. The system was prevalent in some way or the other in different countries in ancient and medieval times. This can tie in with ancient or medieval history lessons.
5. The class as a whole can look at a picture, of say, the Taj Mahal. The students can write why they think/do not think it beautiful. Did everyone give similar reasons?
6. Geography and climate are important for architectural design. Let the students think of as many examples of this in the buildings discussed. For example, where stone is not available, brick made of burnt mud is used. Where the weather is very cold, houses have small windows and fireplaces etc.

>> classroom discussion

12

This discussion can be tied in with ancient history and the concept of historical sources.

At this stage, the teacher can bring in the idea that architecture is a good source of deciphering the past of cultures. The Indus Valley can be taken as an example, where archaeologists have to rely so much on remains of buildings to know about that culture.

• features of a building

In our own city of Pune, there are many things to look out for when you go for a walk or drive. You will notice that each building has some essential parts that are necessary. Architects try to dress them up to look good as well as serve their purpose.

>> windows

For example, take the case of windows. They are the eyes of a house, and like human eyes, there are so many kinds of them.

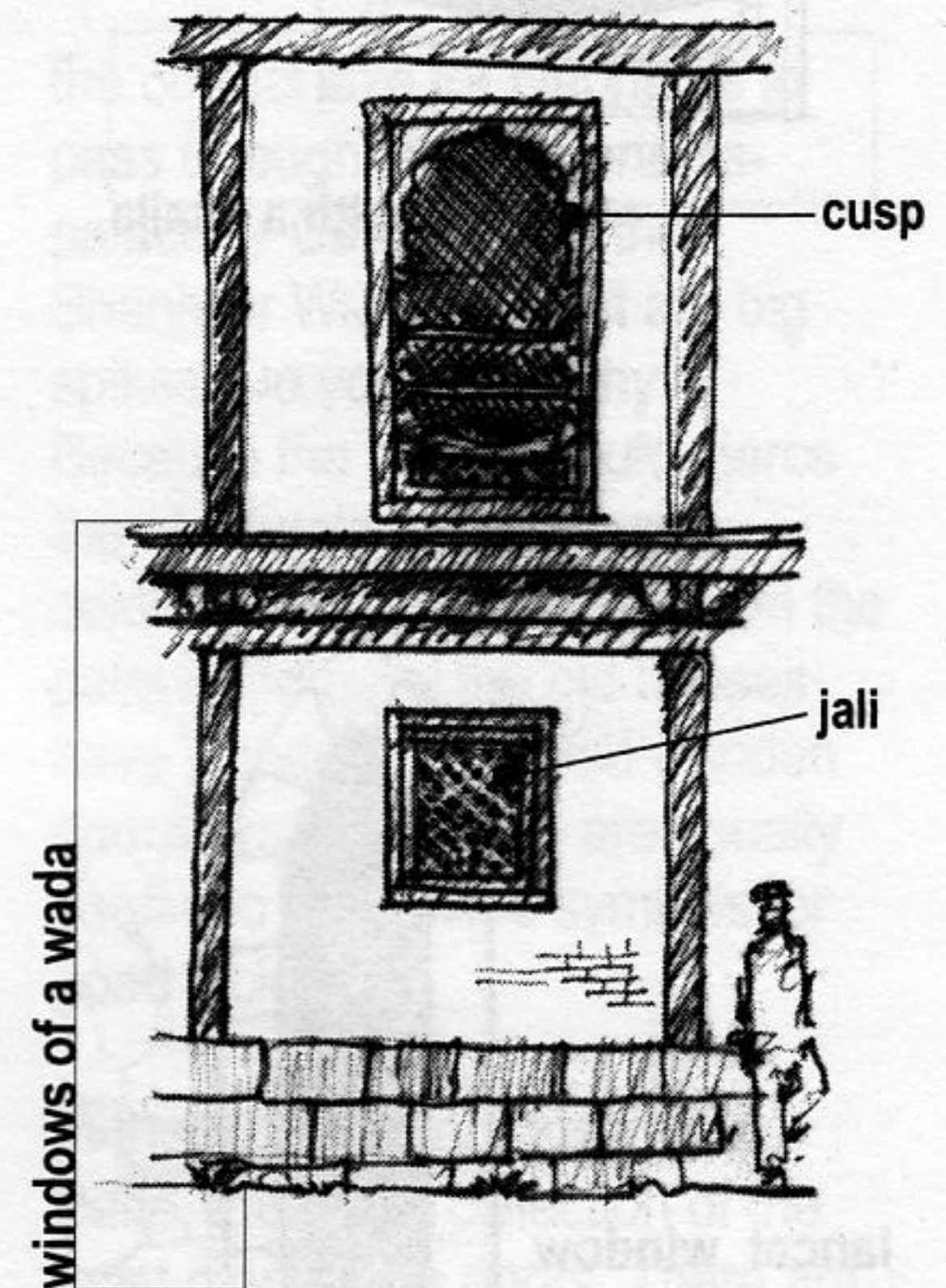
Windows are **essential** parts of a building, because they let in **light** and **air** into the rooms. If they are not made at the right place they do not serve their purpose. Usually they are rectangular or square. Some can be round too. Some modern ones are very large with plate glass shutters, so that half the wall looks as if made of glass. Windows have to be placed in the correct way so that there is cross ventilation and light.

If you go for a walk to Kasba Peth, or any other of the older parts of the city, you will see many old houses that still exist. Look at them carefully. These are known as Wadas. They are typical houses of

Pune about 250 years ago. They have large windows with wooden shutters. These are set inside curling or cusped arches. They were placed opposite each other for good ventilation. They are large to let in enough light. Often these were ornamented by adding two graceful pillars on either side to hold up the arch.

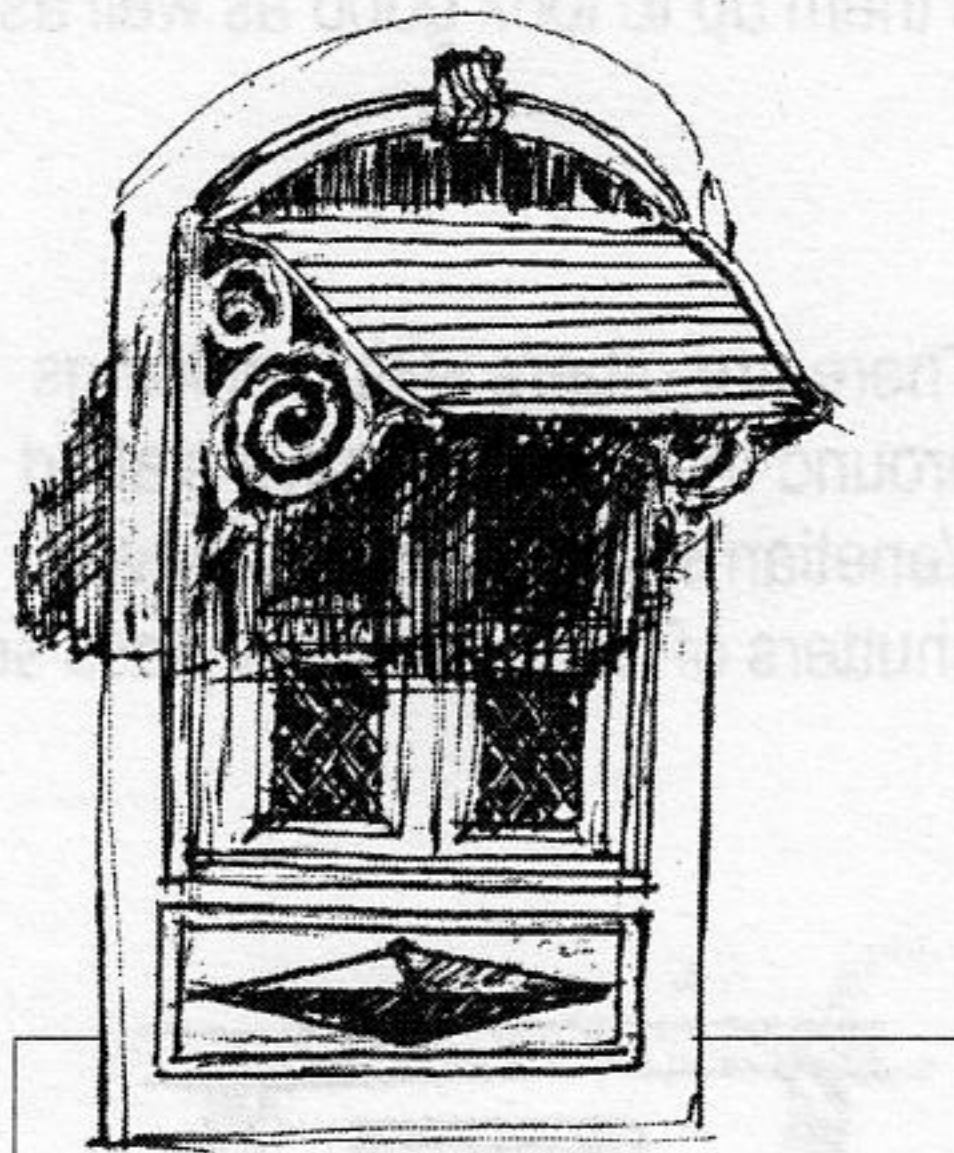
In the cantonment, there are houses with different types of windows. Some have ornamental stone surrounds called **quoins**.

There are others with mouldings around them. Some have slatted Venetian shutters, others have shutters of multi coloured glass set



windows are the eyes of a house and are essential because they let in light and air into the rooms.

features of a building windows



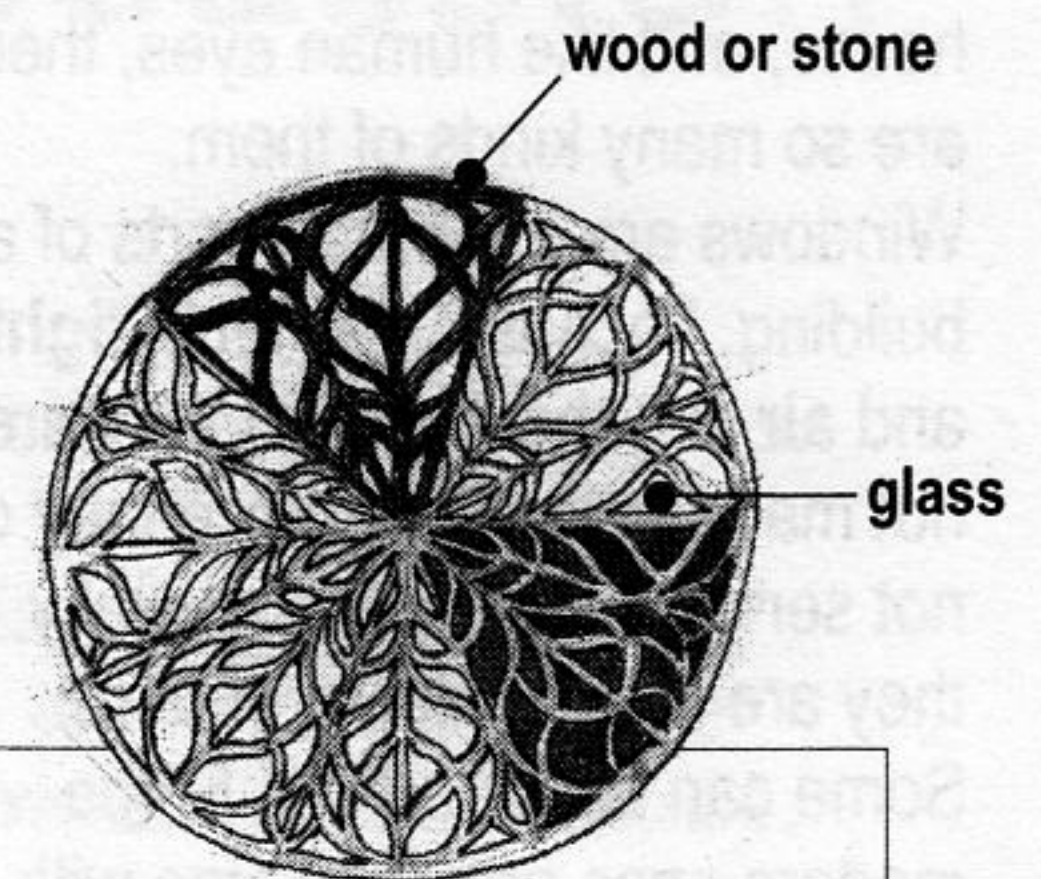
window with a chajja

in diamond shapes. Most have pretty hoods over them called **Chajjas** to keep out the hot rays or the driving rain.

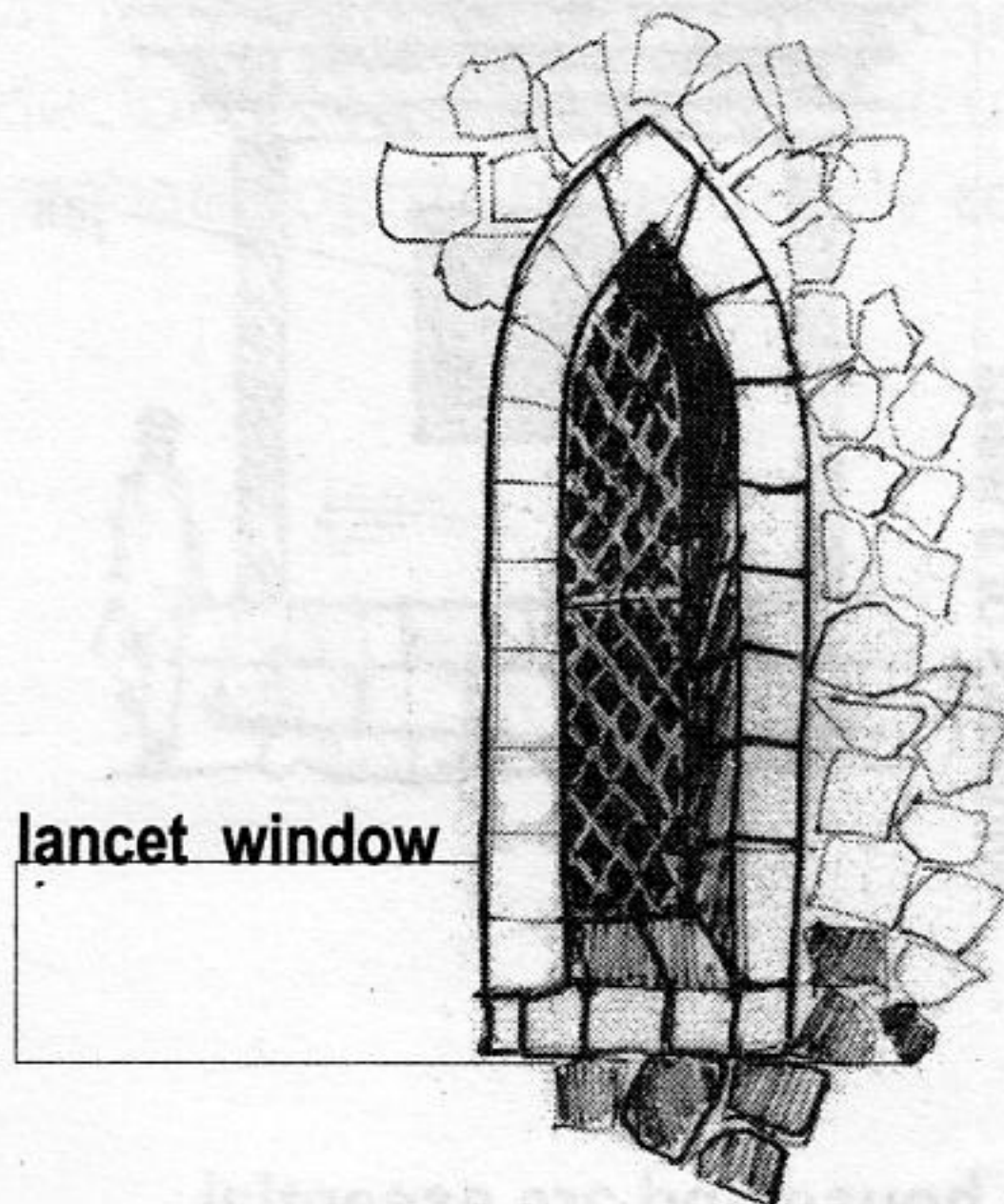
In the various modern buildings, the windows are very large with plate glass and sliding panes.

There are two wonderful examples of round or **Rose windows** as they are called, in Pune. One is on the northern wall of the Council Hall. It has a **motif** called "Star of India" on the glass. The other is to be found in the hall of the Engineering College in Shivaji Nagar.

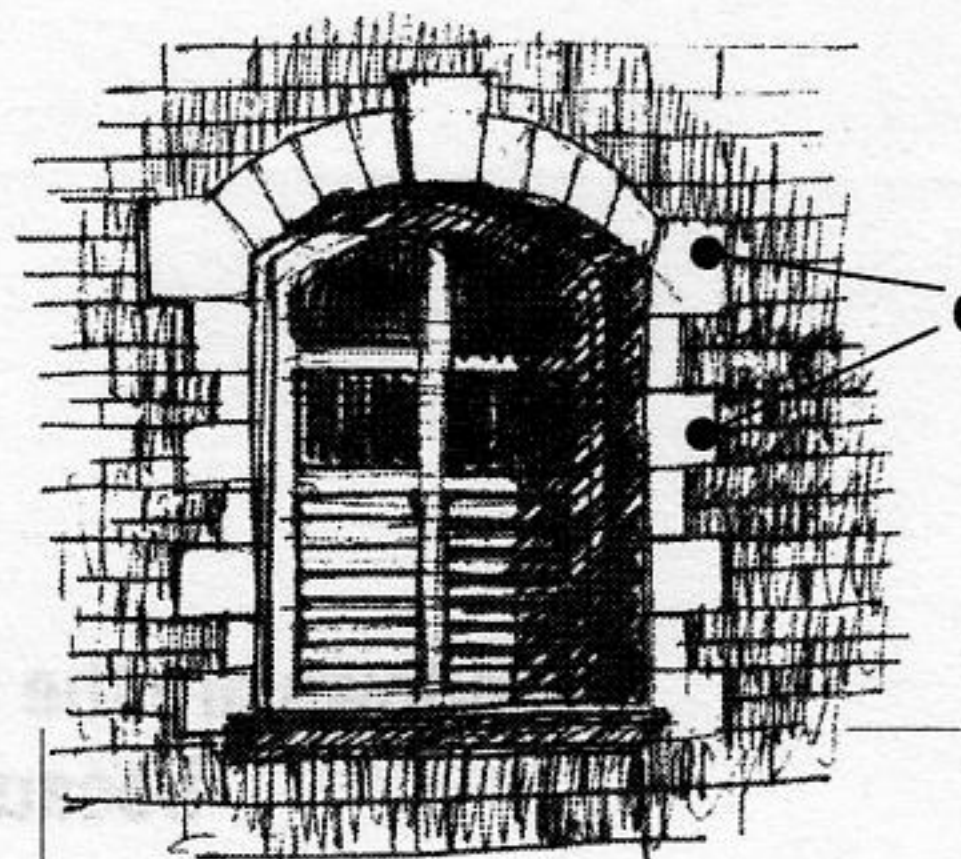
The brightly coloured "stained glass" of these windows throws a warm glowing light in the halls, which they adorn. Such windows are usually seen in buildings known as Gothic.



rose window



lancet window



palladian window

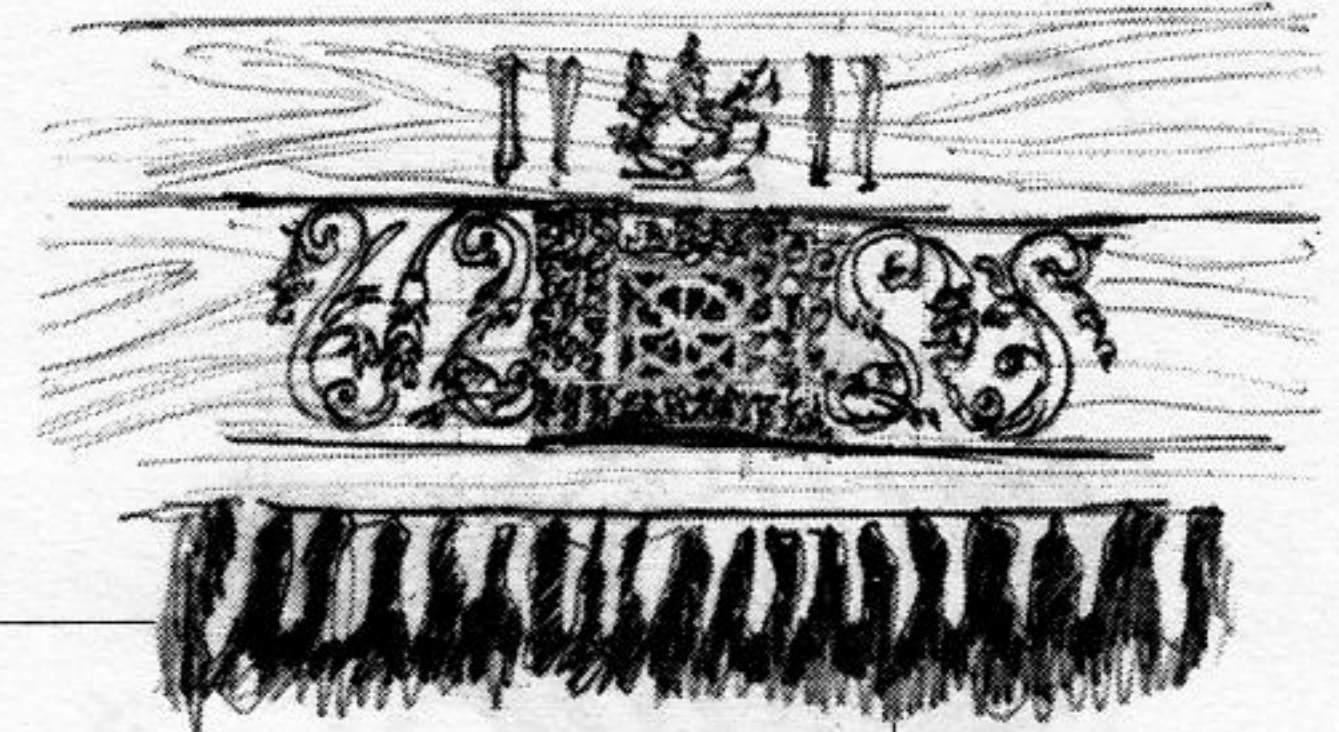
quoins



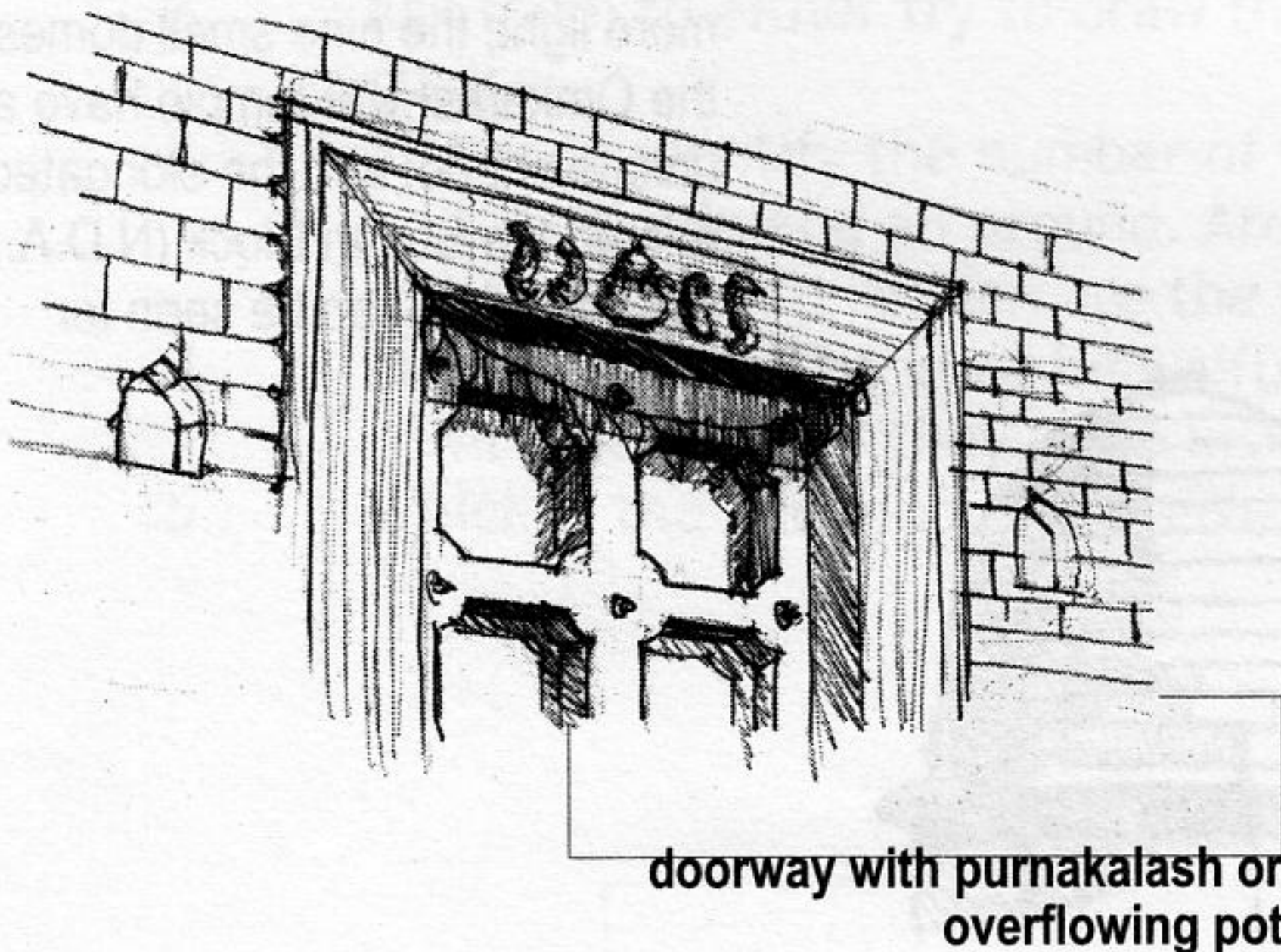
a door is a moveable barrier, that closes the entrance to a building or a room

>> doors

The door is an important part of a house as it is an entrance. But if it is a door of the correct size in comparison to the size of the structure it makes all the difference to its looks. The big gate at Shaniwar Wada is huge, and shaped as a pointed arch. It was



auspicious ganesh patti on the doorway of wada

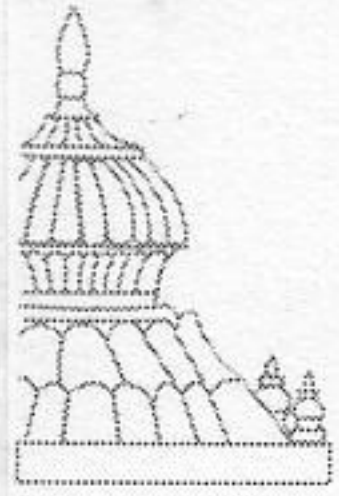


doorway with purnakalash or overflowing pot

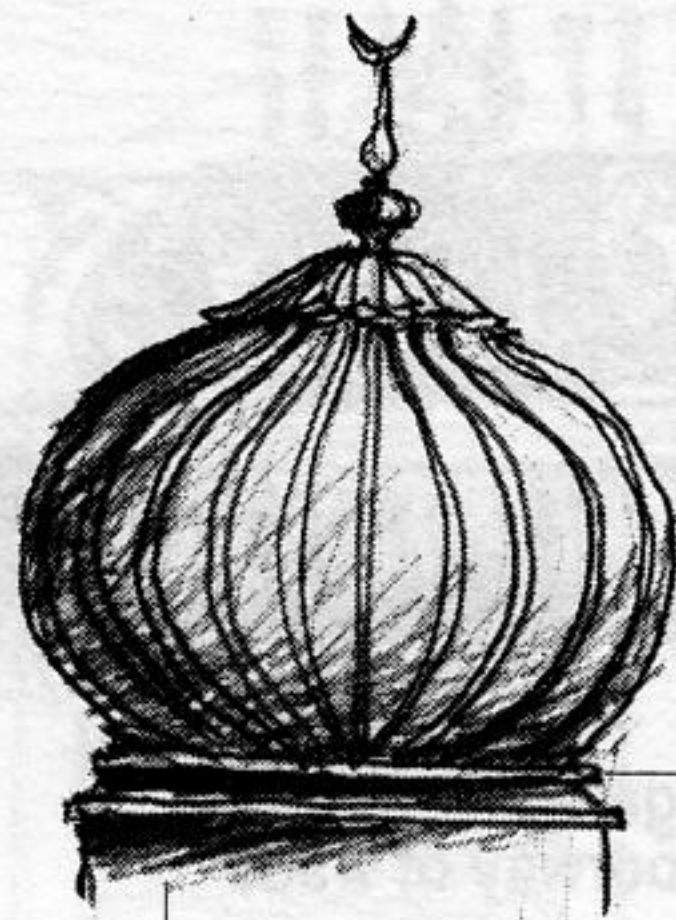
the correct size for elephants to pass through into the fortress-palace or **Garhi**, which the Shaniwar Wada is. On it are big spikes. Do you know why? Because the spikes would pierce the elephants of the enemy soldiers if they wanted to storm the palace. Some of the old houses have wonderfully carved wooden doorways. On the top are usually seen two auspicious symbols for good luck.

In the Raja Kelkar Museum in Pune, there is a collection of the most marvellous doors. There are so many kinds of doors from many places in India. Some are decorated with ivory or brass, and others have the most intricate of carvings.

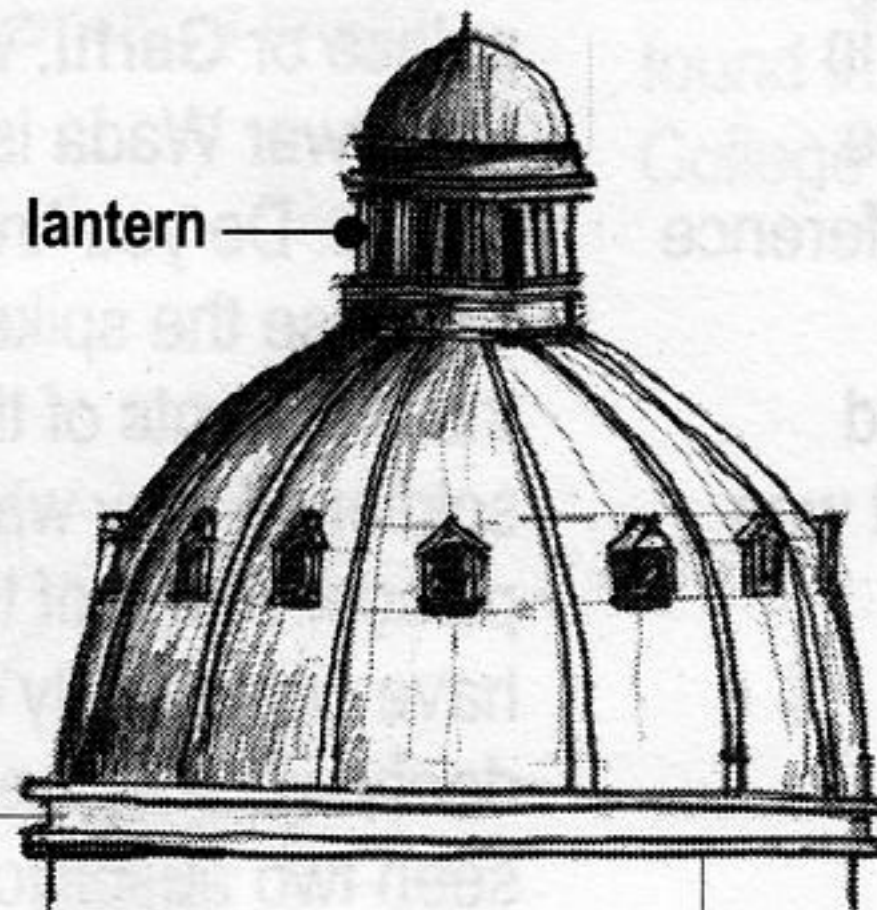
features of a building domes



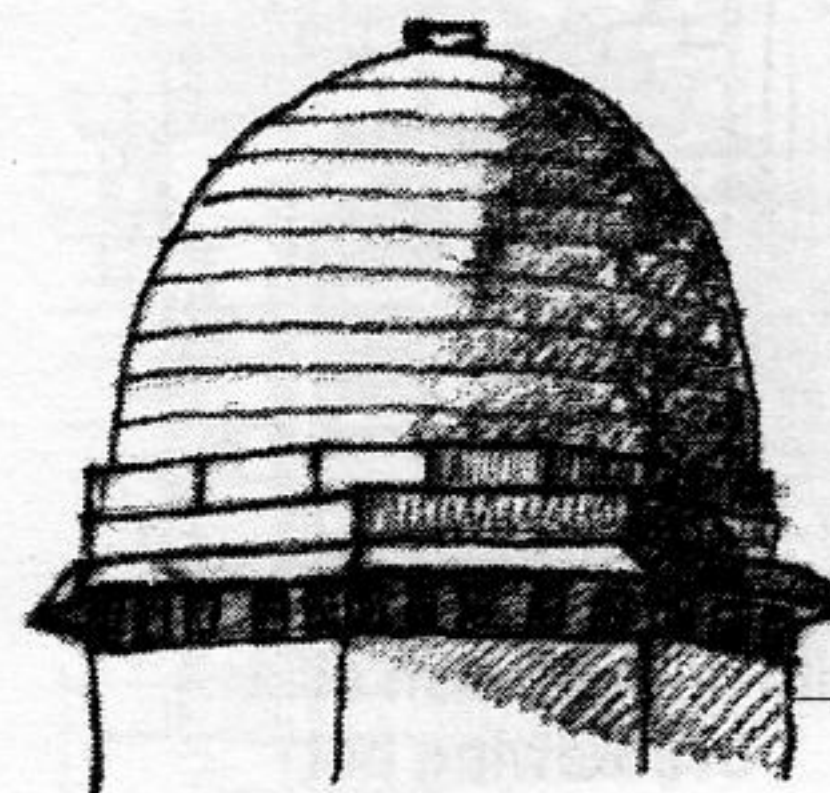
a dome is a type of a roof



onion shaped dome



complex dome with lantern



sudan block dome at NDA

>> domes

A dome is really a roof, originally resembling an inverted cup or hemisphere. As architects learnt more about them, they could make domes of different shapes. These could be half circles, or elongated, or pointed at the top, or onion shaped, etc.

For example, in Pune, there is a round dome on the Central Building and Agricultural College. On the dome of the G.P.O. they put an addition called lantern to let in more light; the nine small domes of the Omkareshwar temple have an unique shape; and the elongated one on the Sudan Block (N.D.A., Khadakvasla) can be seen for miles around.

>> activity

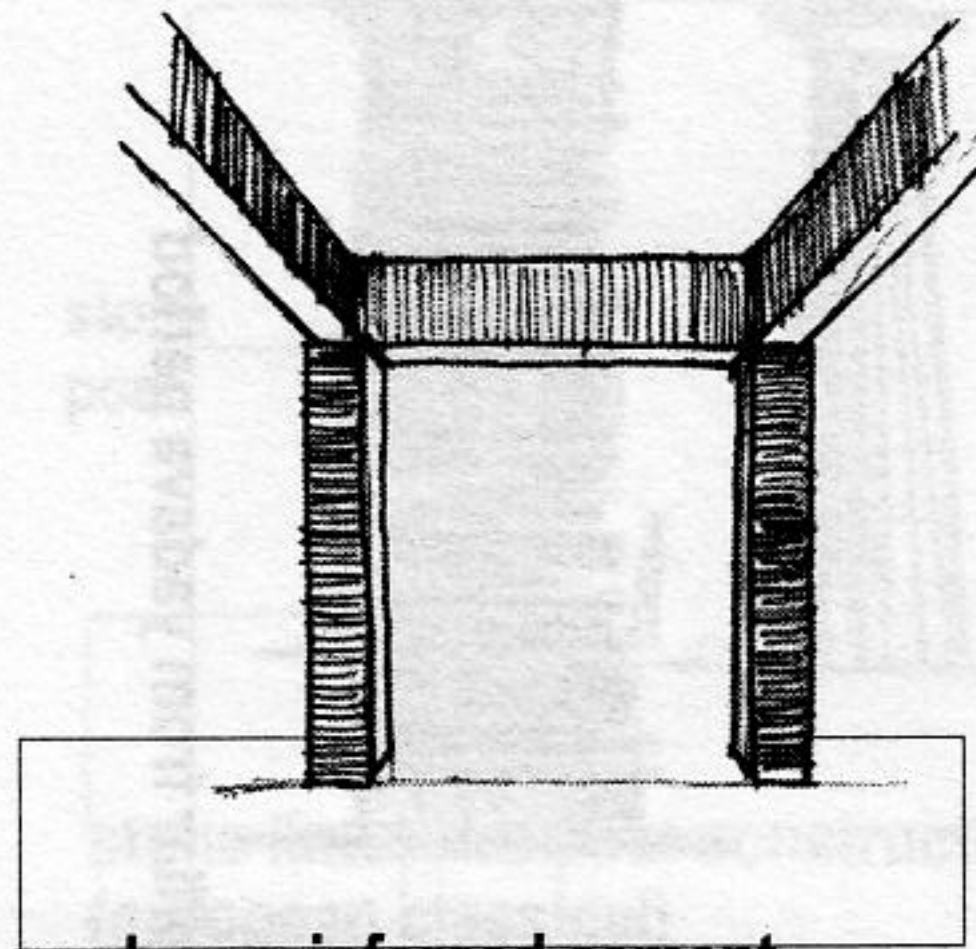
objective

Understanding the importance of windows to the planning of a house; understanding how windows can make a difference to the façade (outward beauty) of a structure.

materials

Large sheets of paper, pencils, crayons or sketch pens, pictures of building facades.

1. Let the students choose any one building they have seen which has windows/or a door they like.
2. Ask them to either try to draw this or get a photograph of the house of their choice.
3. They can identify the number of windows, and show how they are placed on the façade and all around. Are they enough to let in a good amount of light? Which direction are the windows facing?
4. Let them draw the most beautiful window/door they can imagine and/or paint a scene as if they were inside and looking out of their favourite window.
5. Which is the best door they have seen? Why do they like it? Let them draw it.



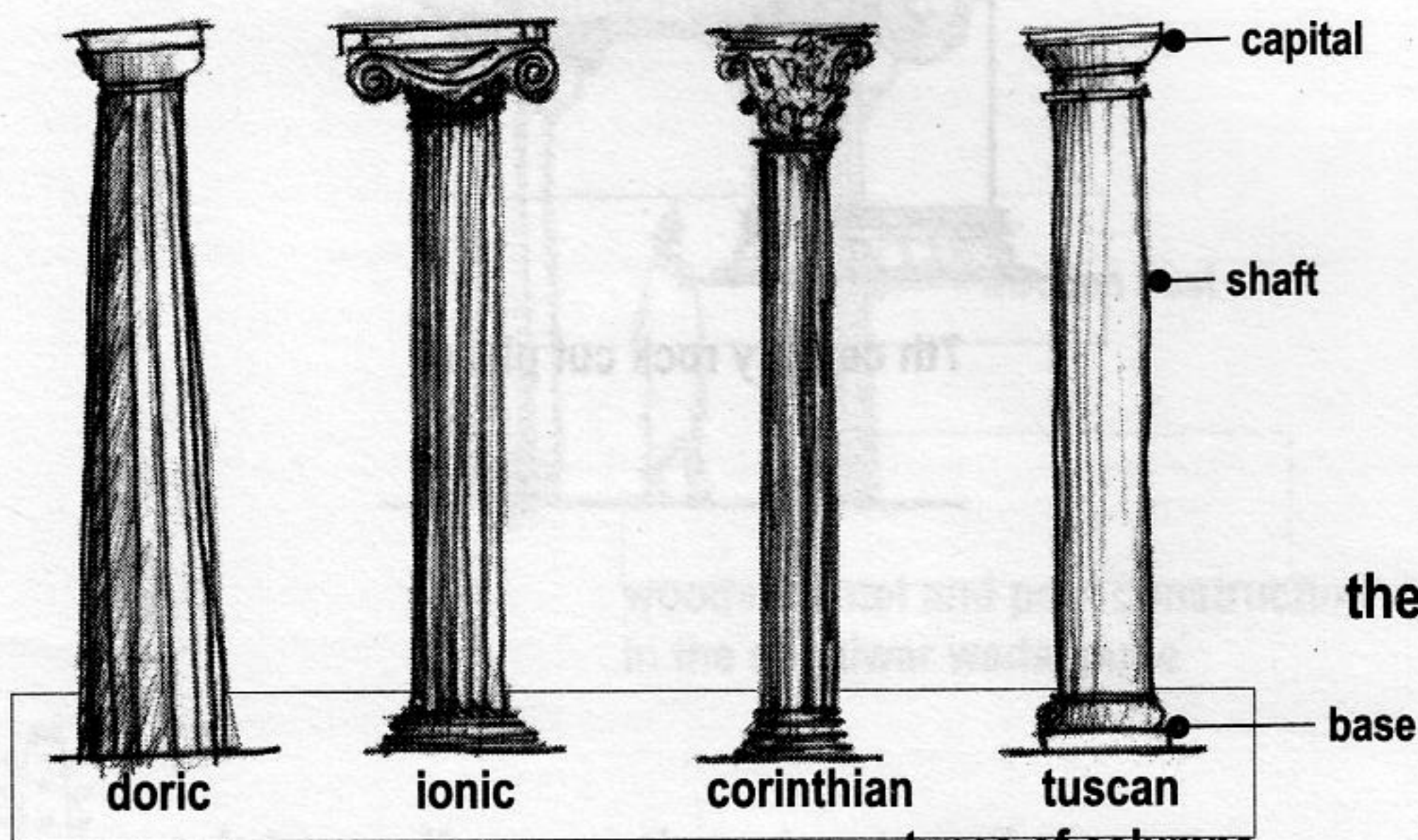
modern reinforced cement concrete structure

>> columns

Let us not forget to look at columns, which is the other name for pillars. Their main work in a building is to support the roof, or the arches. These can be of many shapes and sizes depending on the kind of building and when it was built. A column is made out of **three parts**. The **base** to stand on, a **shaft** or the long body, and the **capital** or head.

There are plain solid round columns, like those in St. Mary's Church. There are thinner longer ones with the capitals decorated with leaves, flowers and creepers. These are sometimes called Doric, Ionic or Corinthian depending on the design. We can see some good examples in the older structures such as the Deccan College.

In Pune, we have all kinds of columns. In the temples around the city, there are very beautiful examples, but the most common is the **suru** or cypress shape. Very graceful, it tapers to the top, rather like the trunk of the tree after which it is named. When there are a series of these in a row carrying **the cusp arches**, it gives a lovely decorative effect. The Peshwas used this style a lot.

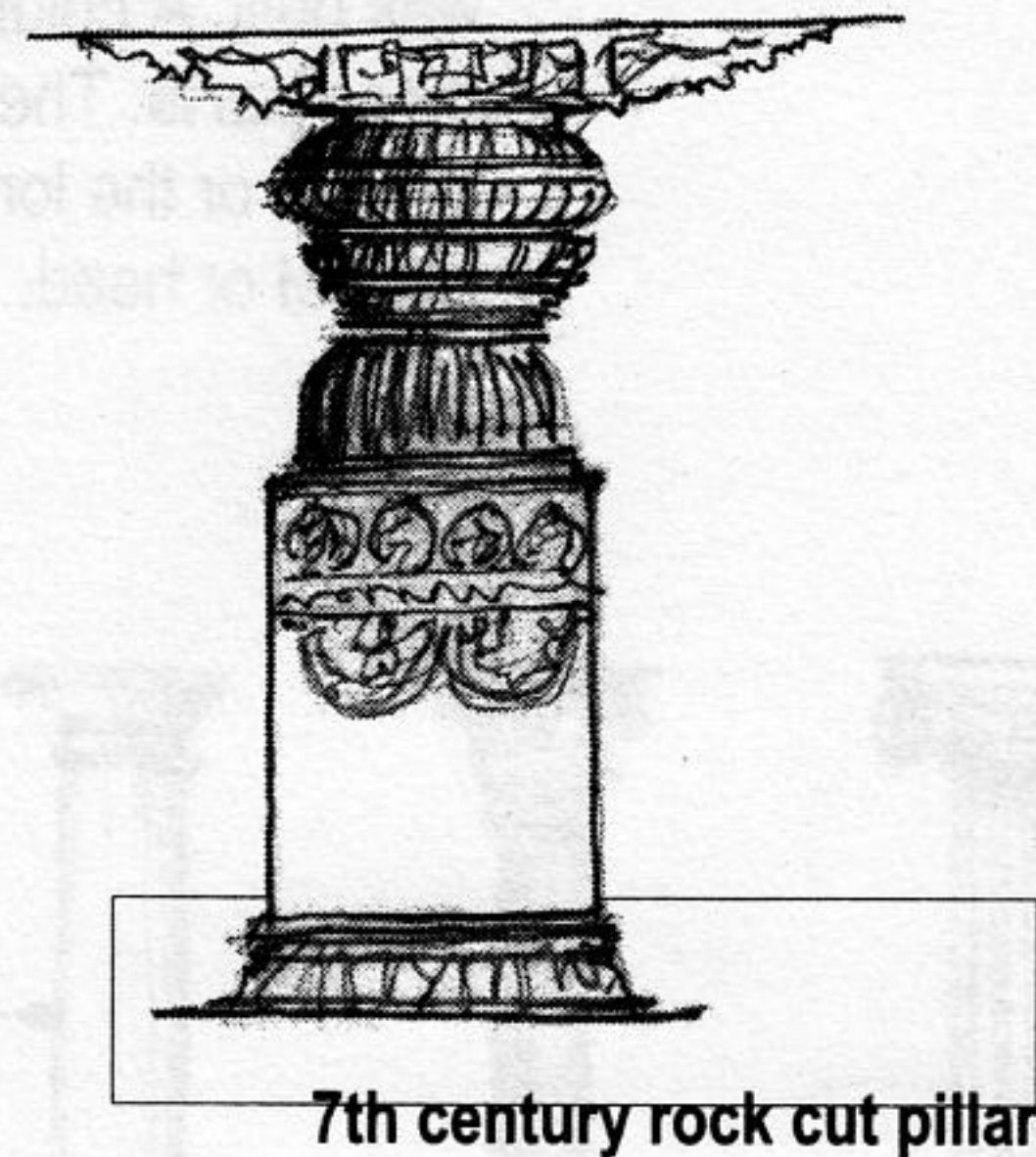
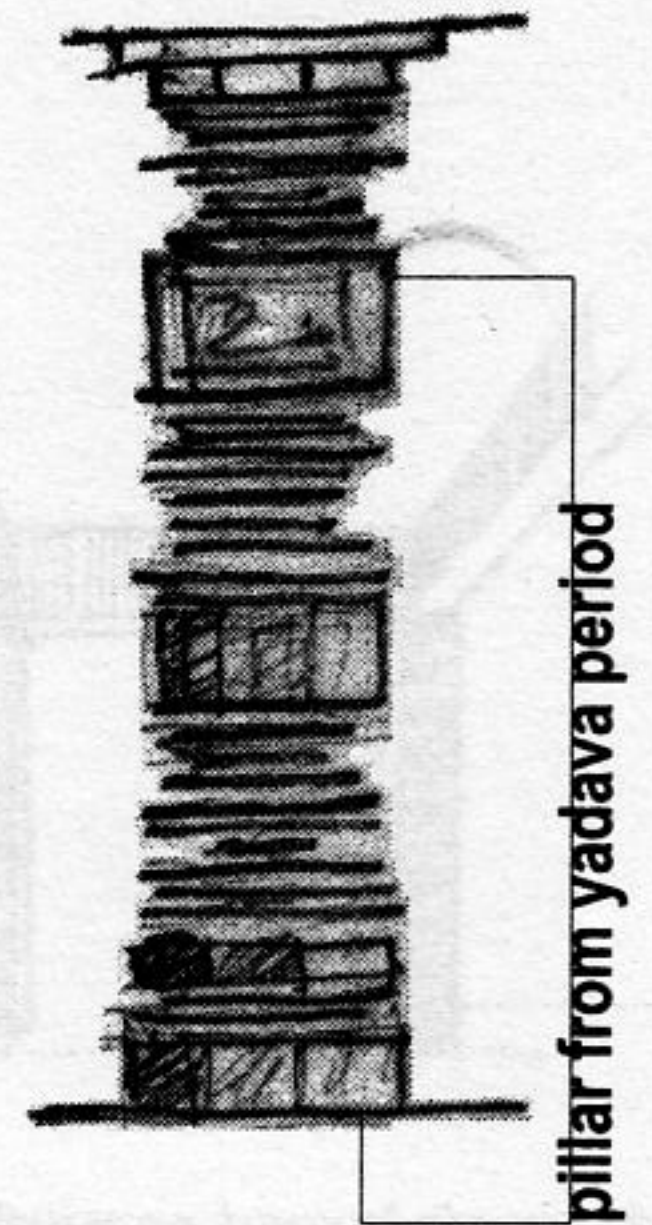


types of columns

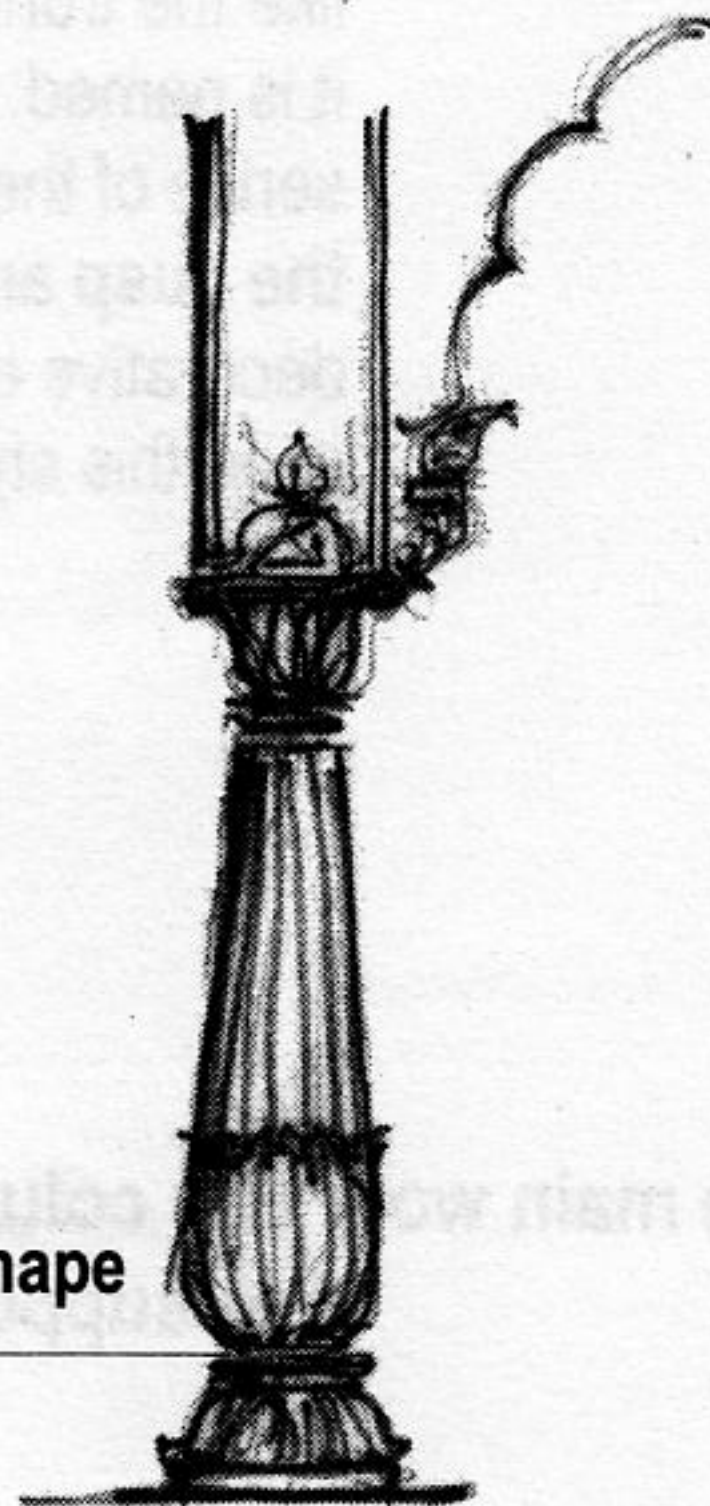
the main work of a column in a building is to support the roof, or the arches

features of a building columns

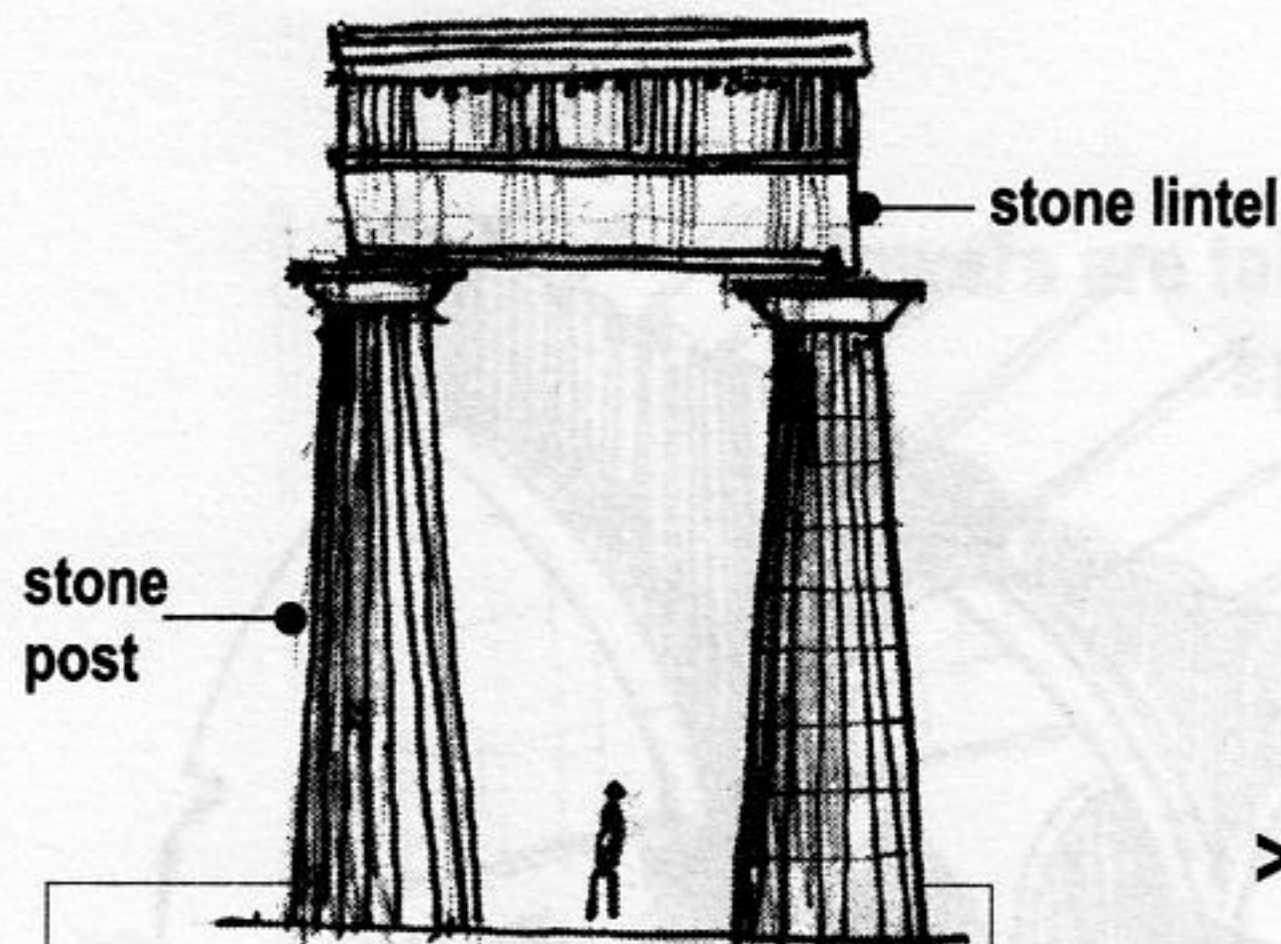
The stronger the column, the bigger and stronger a building can be. In modern multi storey blocks, the columns are first made of concrete, later the spaces are filled in with thin brick walls, which act rather like curtains or partitions. The modern material of RCC (reinforced cement concrete) has made building cheaper and faster, though sometimes in our hurry there is no time to add decorations. Columns of concrete are usually not distinguished from the wall and are meant for strength, something like a human skeleton.



suru or cypress shape
common in pune



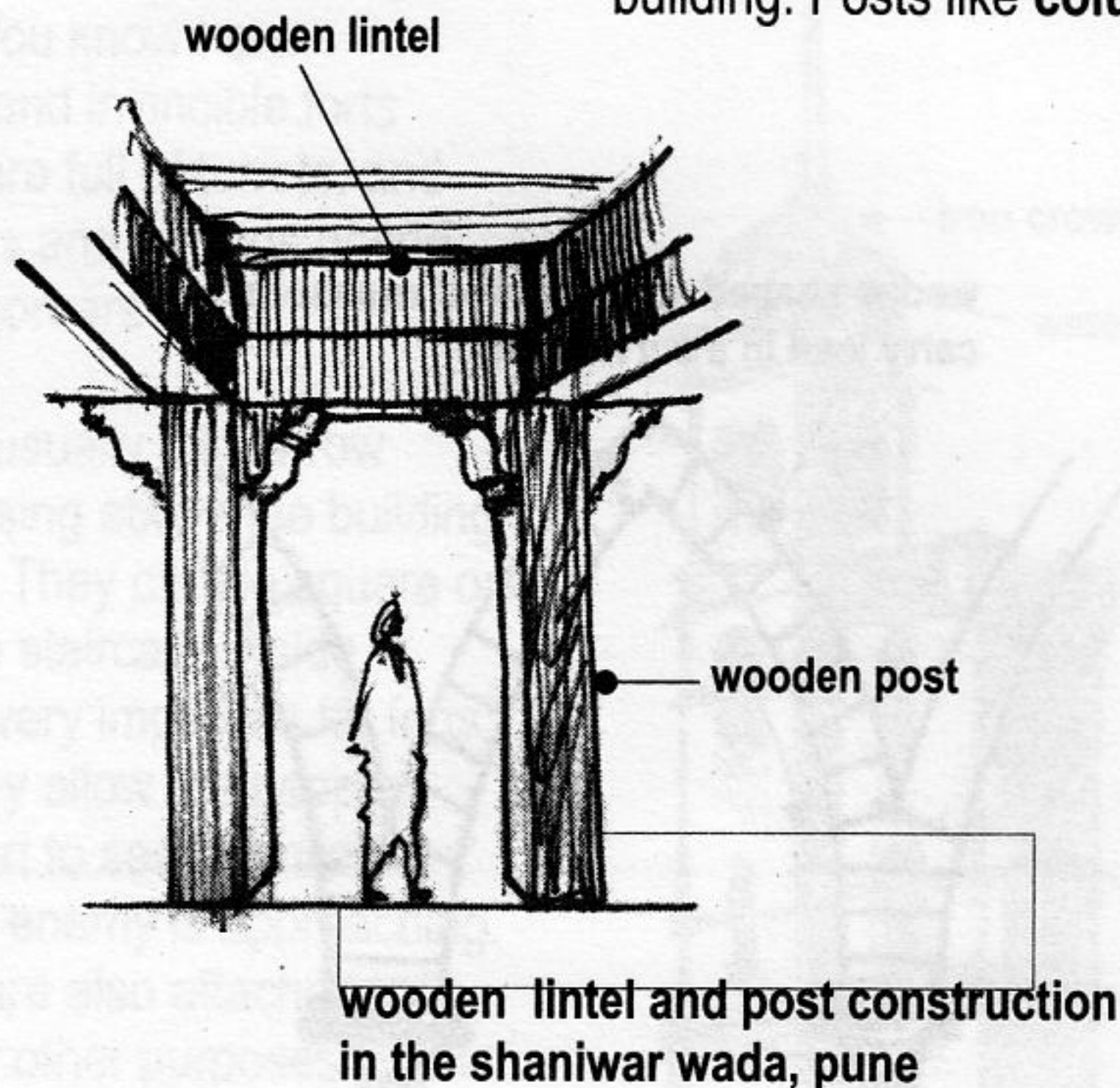
features of a building arches



stone lintel and post construction
(European classical)

>> arches

Another important aspect of building is the problem of supporting the roof. Roofs of houses could be supported on straight posts and beams. This is called post and lintel type of building. Posts like **columns** are



wooden lintel and post construction
in the shaniwar wada, pune

**an arch is a self supporting structure that
distributes the weight of the roof evenly over pillars**

vertical supports, while **beams and lintels are always horizontal** usually needed for making roofs stronger. But though post and lintel structures were quite strong they had one drawback. It was not too easy to cover very large spaces by this method. This was especially so when stone was used as the building material. If the roof became too heavy, too many columns would be needed to hold it up, and the hall below would become a forest of pillars!

But when people learnt how to make an arch, they were able to distribute the weight of the roof evenly with much fewer pillars. This is a feat of engineering. Not only did they make it easy to build bigger buildings, arches also helped to beautify them.

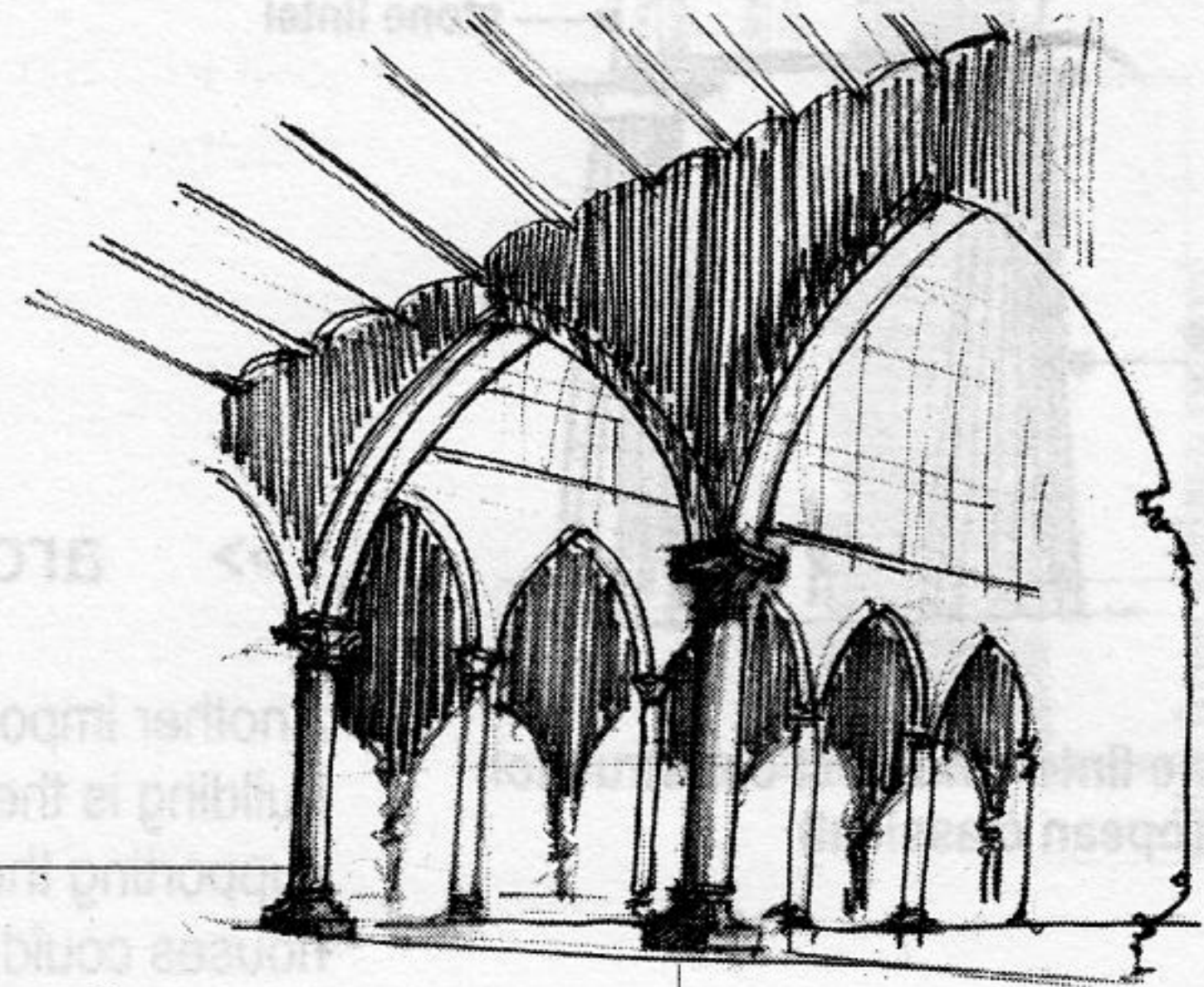
There are many kinds of arches. They can be round or pointed or broad or with curls (cusps). A whole row of them is called an **arcade**. Arches and arcades make a building look lighter and prettier. Arches are also used a lot in bridges. There are a number of arched bridges in Pune.

features of a building arches

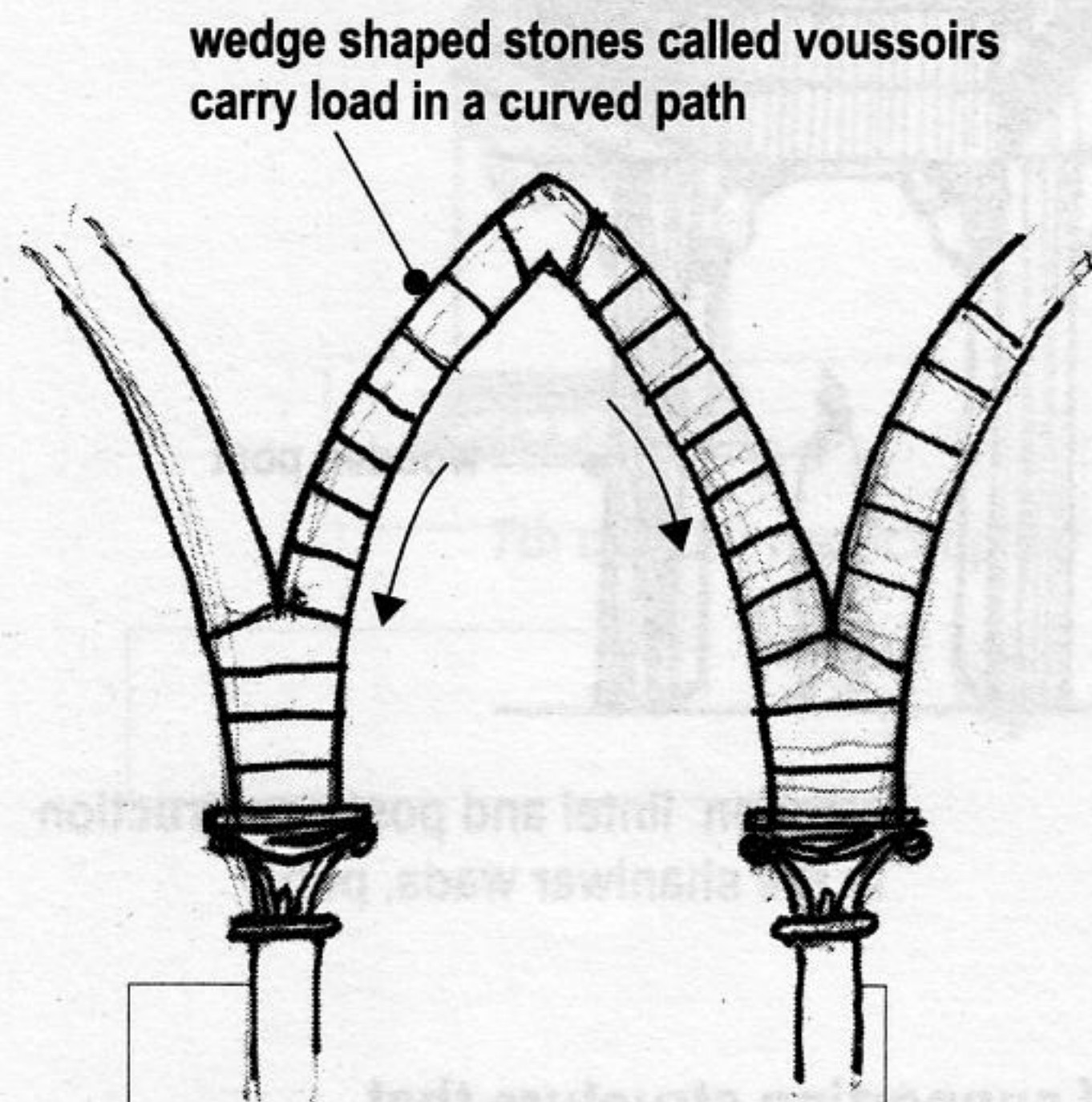
Usually round arches in European architecture are called Classical or Renaissance. Both are big words. They signify a time in the history of Europe. The Classical style grew in ancient Greece and Rome; and Renaissance was a time about 500 years ago when these styles were reborn in Europe.

Pointed arches made their appearance in Europe in the time between Classical and Renaissance, that is a period of about 800 years (from 6th -14th century A.D.) The style of this long period was called Gothic. Later both types were copied over and over again.

Some wonderful examples of the strength and beauty of arches can be seen in the older bridges of Pune.



gothic arcade at deccan college
(pointed arches)



transfer of load in an arch

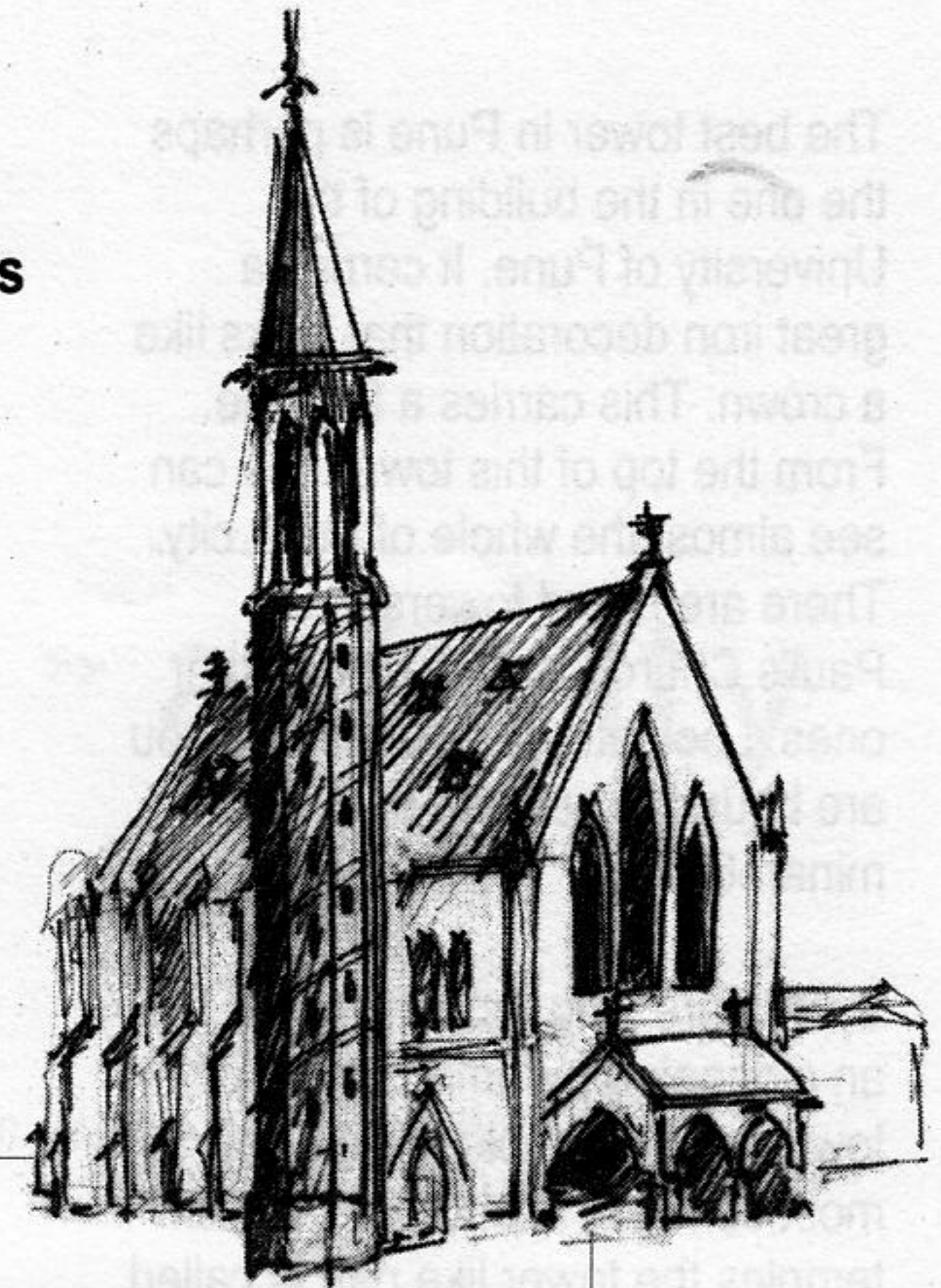
features of a building towers and spires

**towers are tall narrow structures, and
spires are tall tapering roofs**

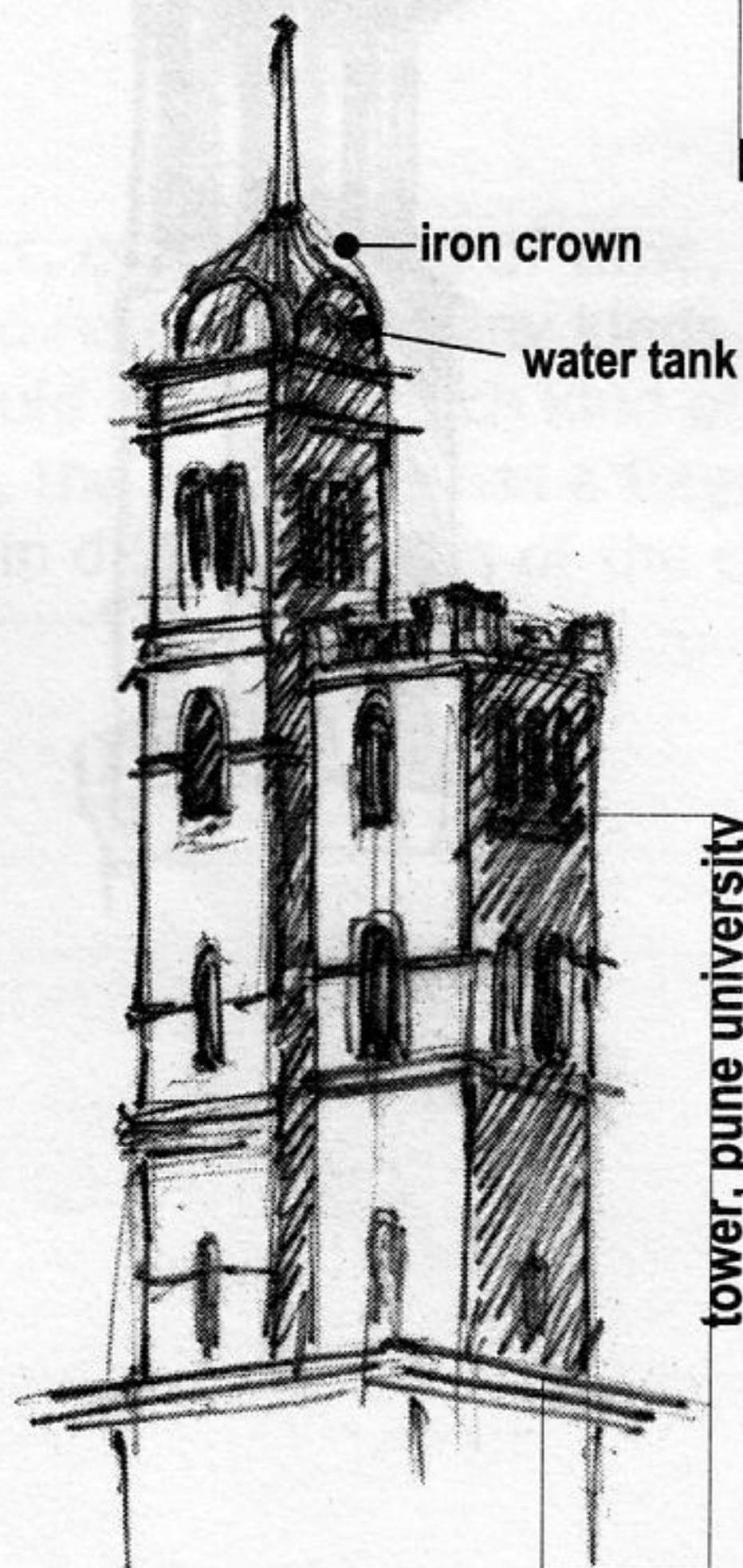
>> towers and spires

Then there are towers and spires and minarets, which make buildings look more interesting and important. You know how mysterious and invincible forts look. They are full of turrets, and round towers and all sorts of odd nooks and corners.

Towers are usually tall narrow structures rising above the building or next to it. They can be square or round with a staircase inside. Towers are very important for forts, because they allow the people inside the fort to see for miles around if an enemy is approaching. But towers are also attached to buildings for other purposes. Some towers carry a water tank above. Churches have bell towers (belfry), from which the bells toll during



belfry, st. pauls church



tower, pune university

ceremonies. Mosques have slim towers called minarets from which the aazan is called before prayers. Sometimes they are just there for decoration. For example there is a beautiful one in the Council Hall, which does not have a purpose!

features of a building towers and spires

The best tower in Pune is perhaps the one in the building of the University of Pune. It carries a great iron decoration that looks like a crown. This carries a flagpole. From the top of this tower one can see almost the whole of Pune city. There are round towers in St. Paul's Church, and in some other ones. Look at any mosque and you are bound to see two or four minarets.

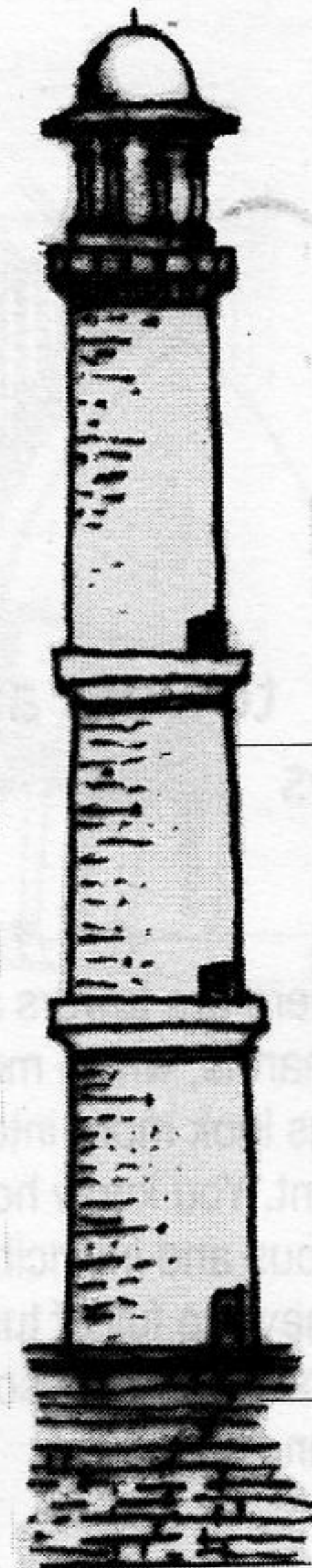
Spires are long tapering roofs, like an elongated pyramid, on top of towers or on temples. They are most common in churches too. In temples the tower like part is called a Shikhara. In Pune we have many types of Shikharas - square, round, and pyramidal.



minaret



tower, deccan college



another type of minaret



>> activity

objective

Ability to distinguish complex shapes and relate them to the usage of the building.

activity

Let the children make a project, over a period of time, divided into groups according to which area they live, and try to record how many kinds of shikharas, spires, towers and domes they can find. They should also say which kind of structure has these features. (e.g. Churches have the bell towers, the university has a flagpole tower, etc.) A group should ideally have children who live in different parts of the city.

• religious structures

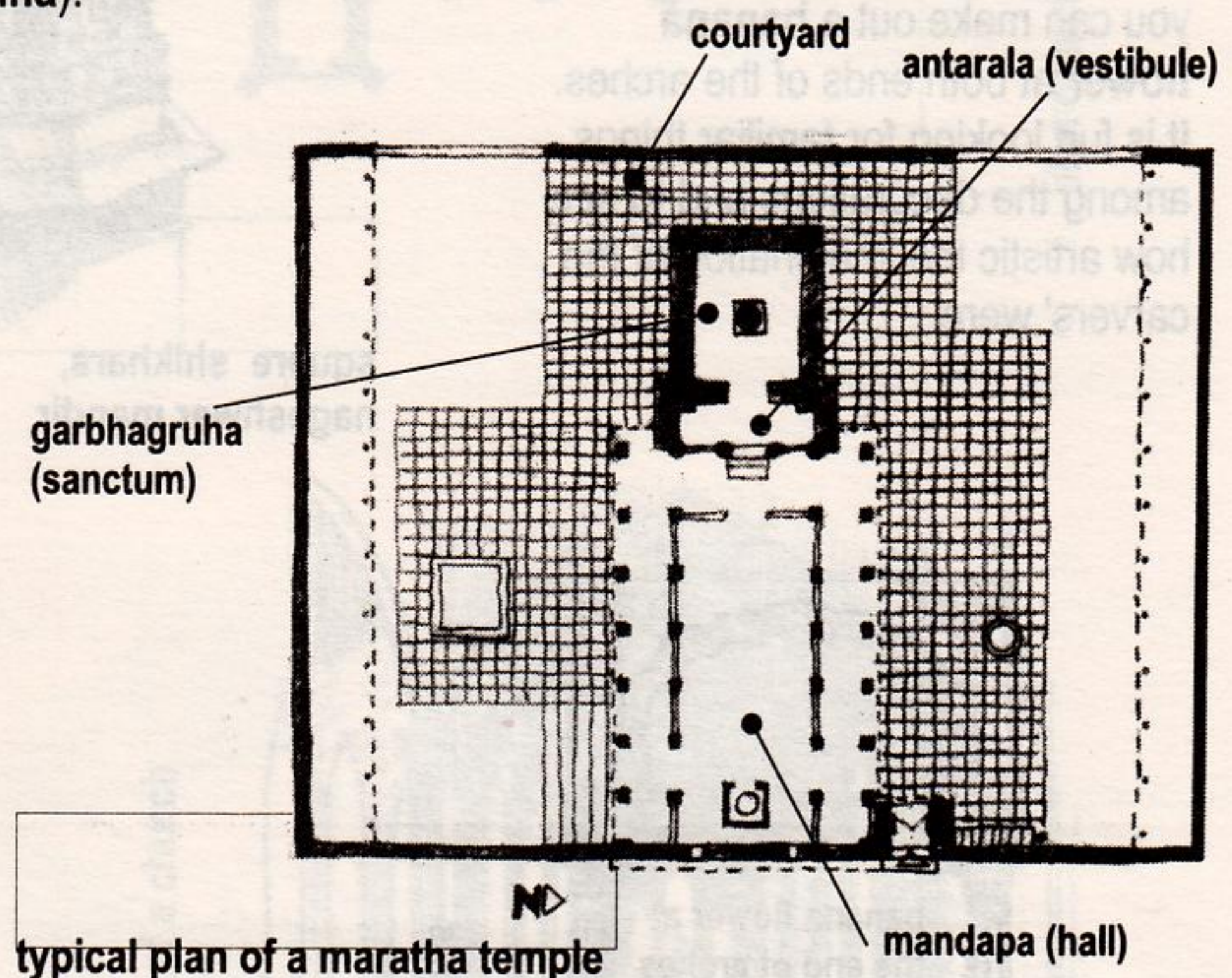
People, whatever culture they belong to, seem to have the instinct to put their best efforts into their religious places. These are the symbol of their philosophy and their spiritual values. The built form of these religious places reflects the way the rituals of prayers are conducted.

>> temples

Let us look at the various parts of a temple first, as there are so many in Pune. When you enter a temple, you will see that the deity is kept at the furthest end, in a small space usually quite dark and without decorations on the walls. But we know where the deity is kept if we look at the outside, for over this small space (**garbhagriha**) is the towering **shikhara**. On the outside this part can be square, round, octagonal or star shaped.

In some temples the shikhara is like a square pyramid. In others as at the Ram Mandir in Tulshibag, it is round and tapering. Shikharas are profusely decorated on the outside. Look carefully, and you will see that the decoration consists of bands of miniature temples and statues and pillars, but decreasing in size, and the design is repeated over and over till the top. This was a good way to fill up the blank

sides of the shikhara and make it interesting. There is always space for people to go around the garbhagriha as it is a part of ritual. (**pradakshina**).

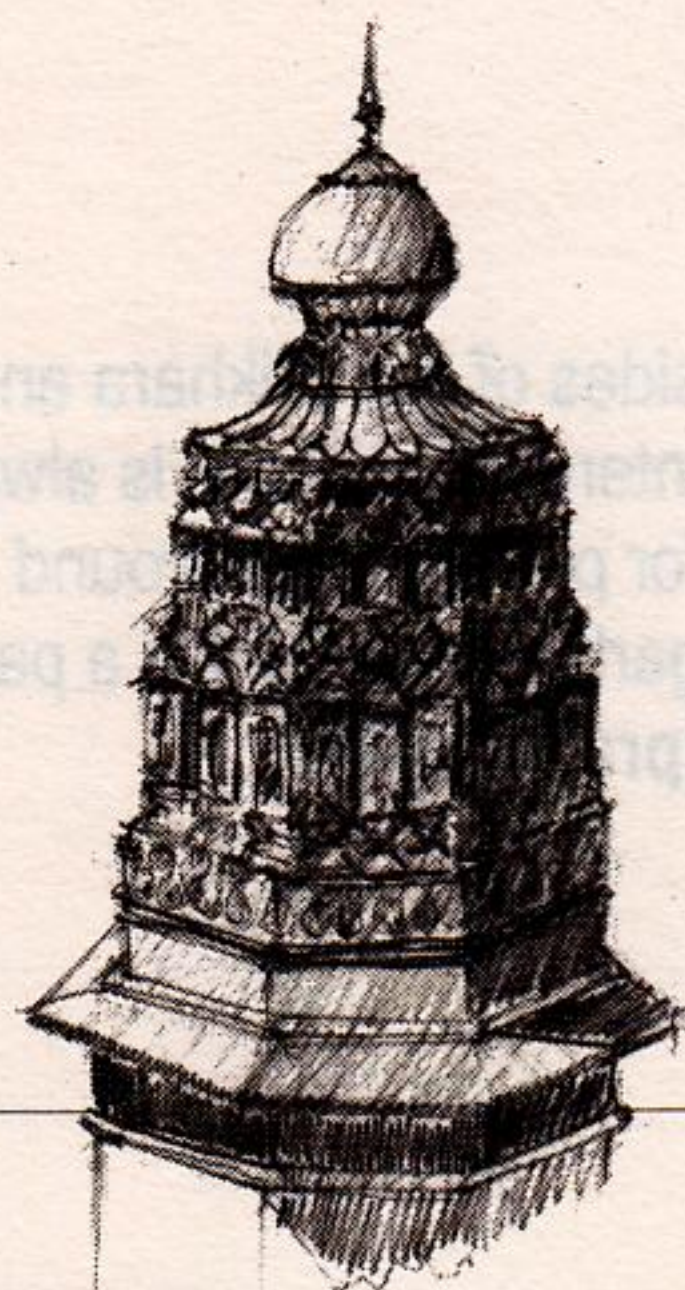


religious structures are the symbol of the philosophy and spiritual values of a people

religious structures temples

In front of the deity is usually a long hall. In big temples there may also be two or more halls. This space is open at the sides and is usually profusely decorated. It is here that people gather to sing Bhajans, and listen to readings of holy books, and other such religious activities. At Kasba Ganapati, or Tulshibag, the hall has carved wooden ceilings and the **suru** columns we spoke about earlier. The arches are cusped. Look carefully, and you can make out a **banana flower** at both ends of the arches. It is fun looking for familiar things among the decorations and to see how artistic the imagination of the carvers' were.

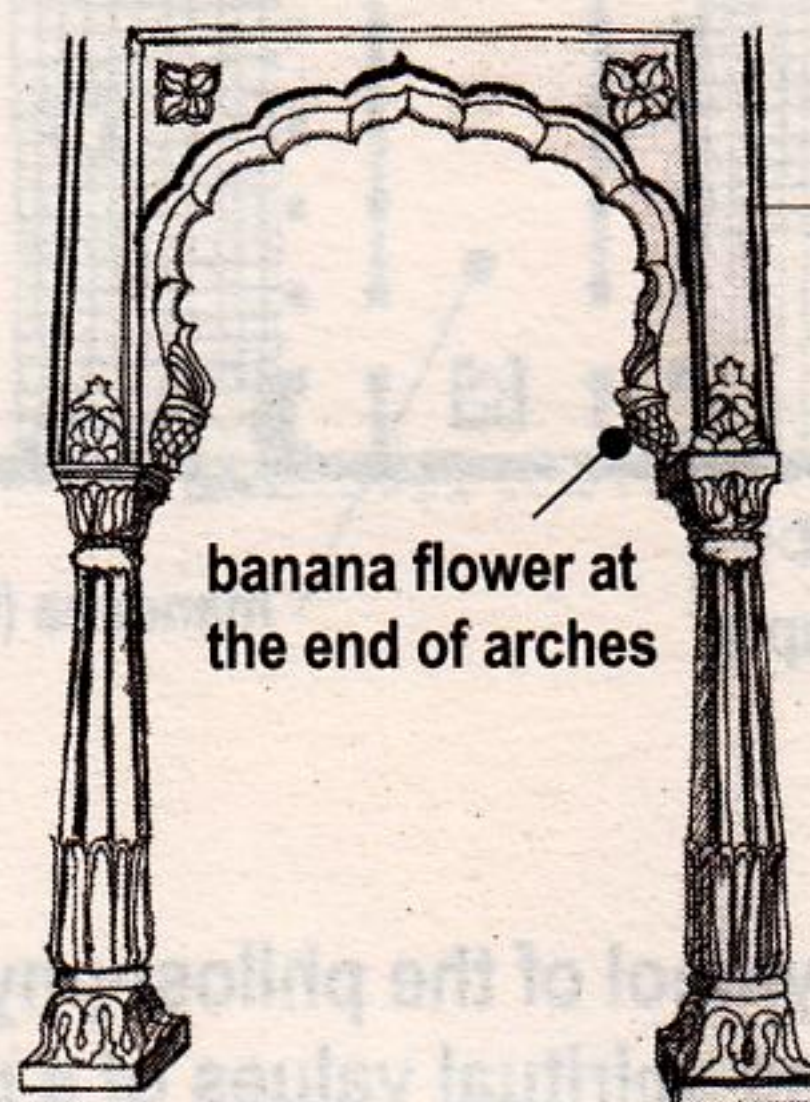
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square shikhara,
nageshwar mandir

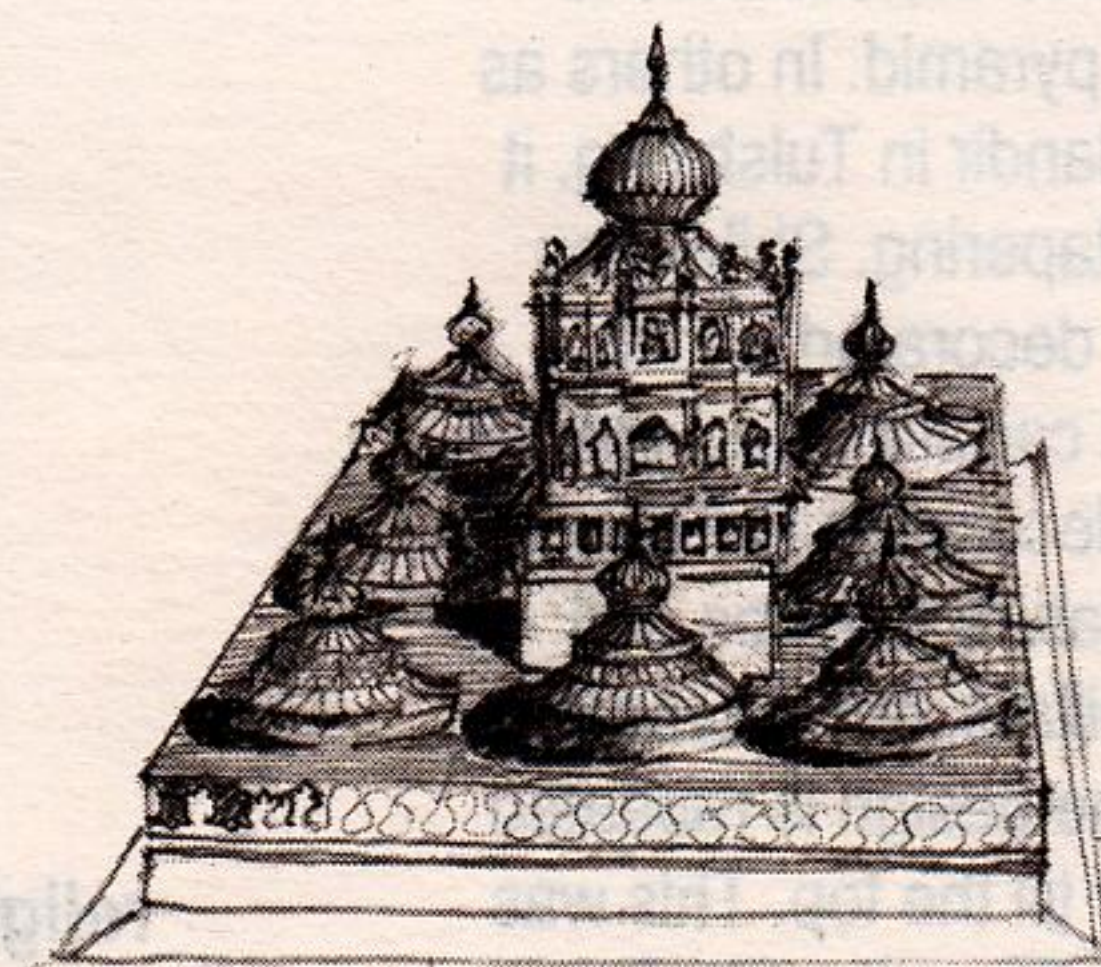


round shikhara, ram mandir



banana flower at
the end of arches

decorative elements



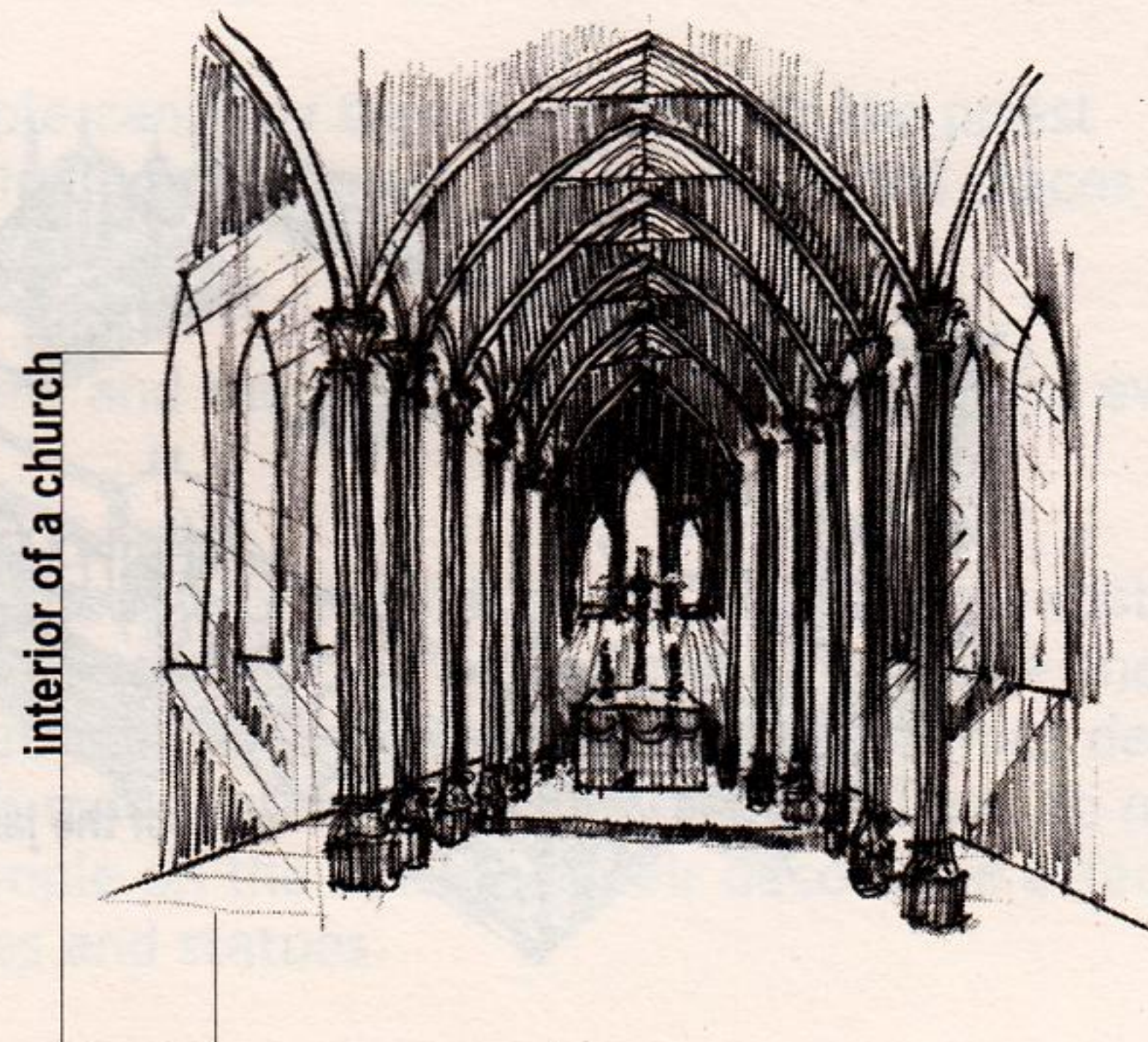
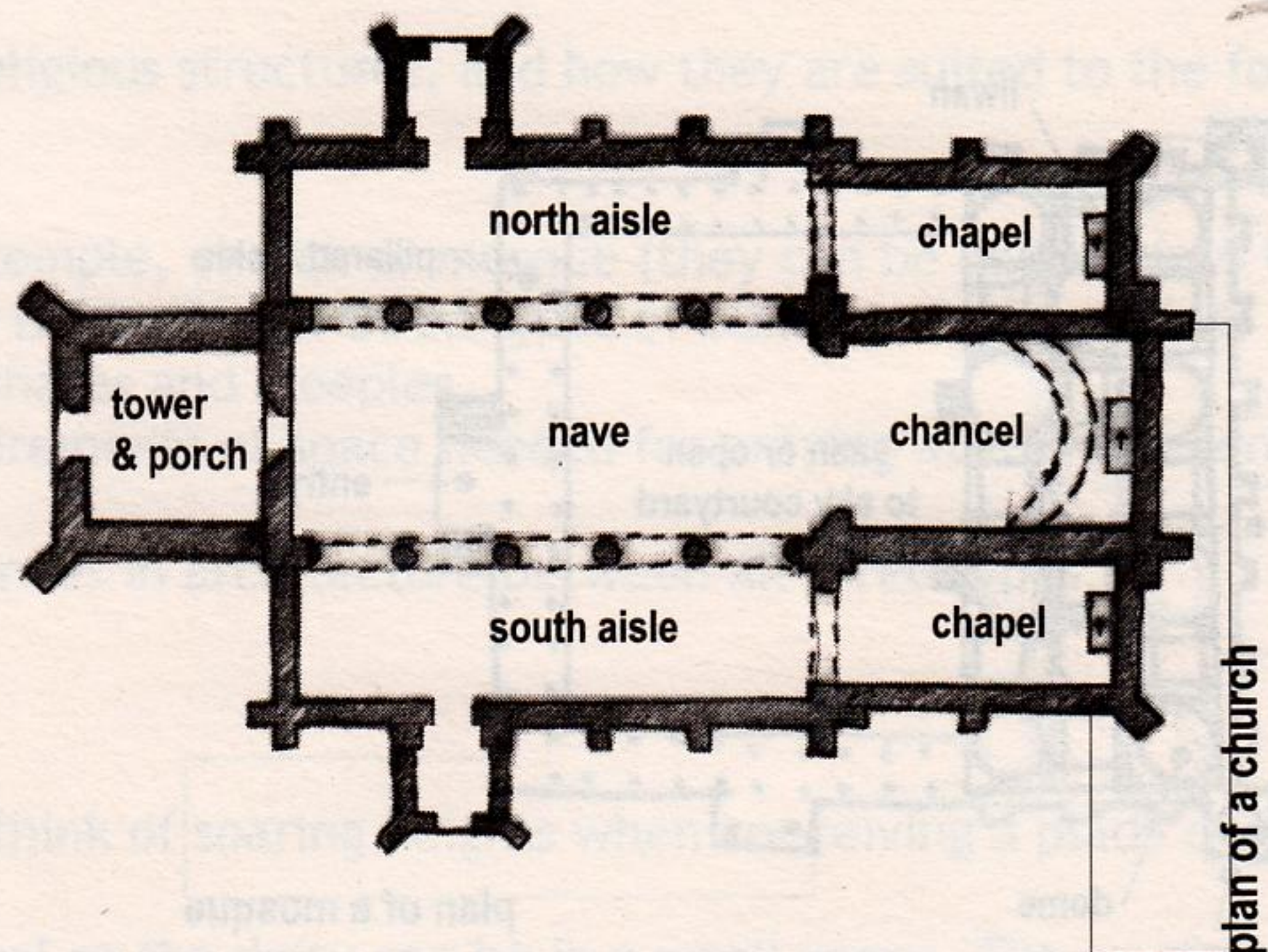
omkareshwar mandir

>> churches

The inside of a church is quite different from a temple. Churches have a long hall that is sometimes divided on both sides by passages called **aisles**. These are separated by rows of columns. In the hall there are wooden seats like benches called **pews**, for people to sit during prayers.

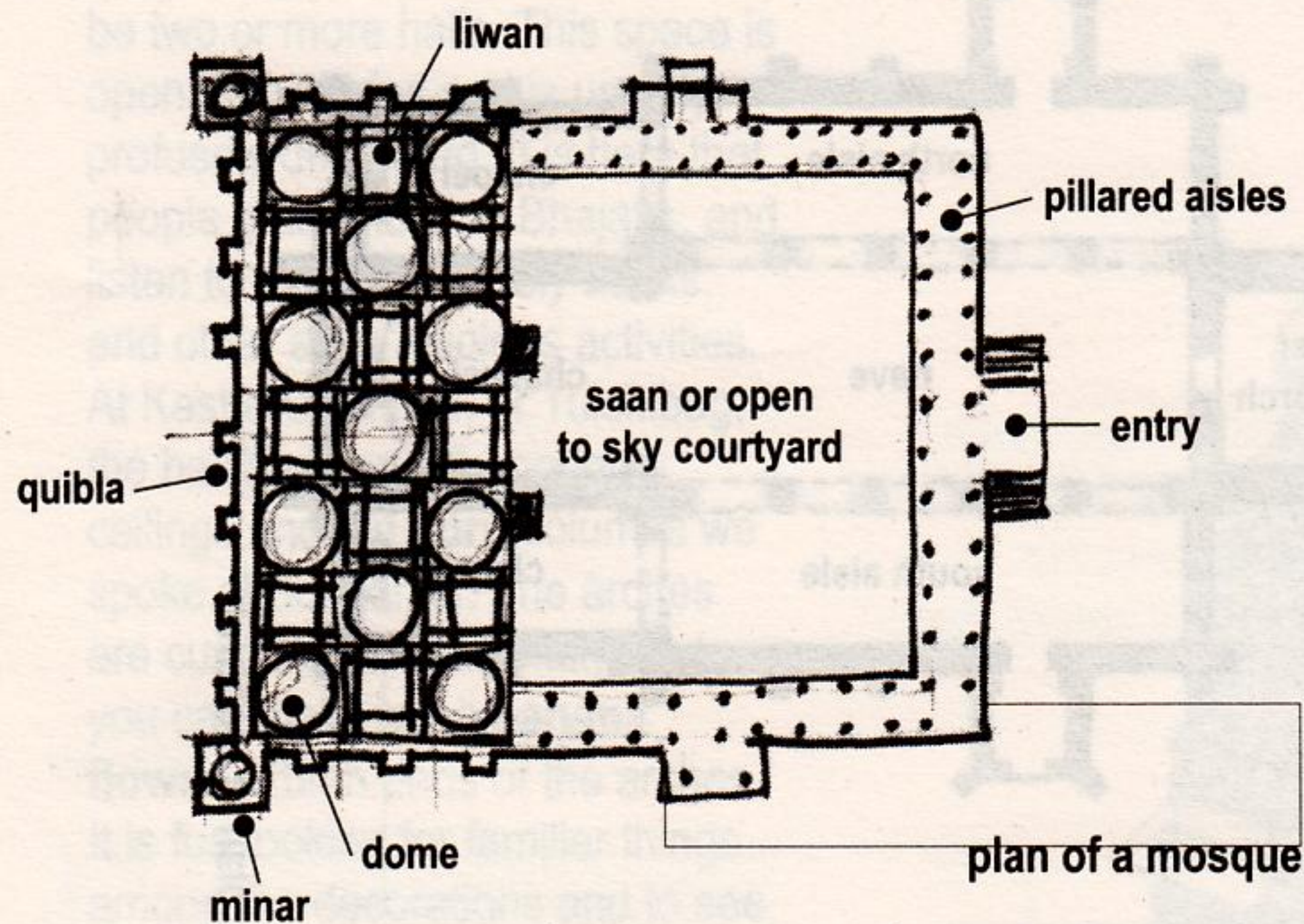
At the far end is the place where there is the altar for the priest to use. There is also space for the choir to stand and the **pulpit** from where the priest speaks. This whole area is called the Chancel. The floor plan of churches **sometimes resembles a cross**, eg. St. Xavier's Church opposite St. Vincent's school, and St. Mary's Church.

Churches often have domes too, but there are no domed churches in Pune. Some churches also have the most beautiful coloured glass windows. These show stories from the Bible. The glass is made by a special technique known as **stained glass**.



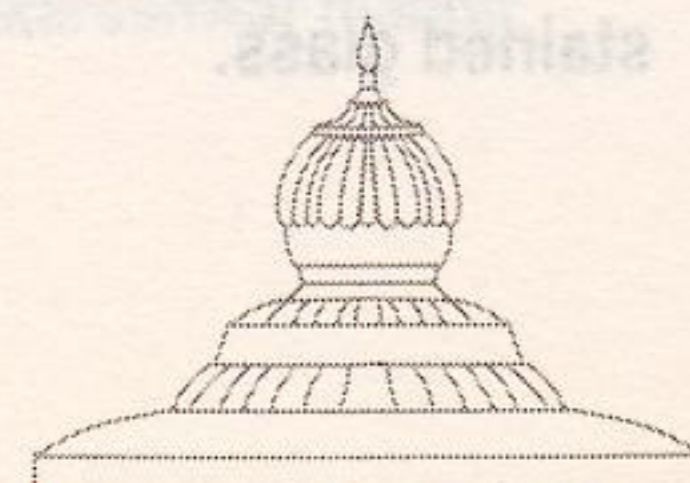
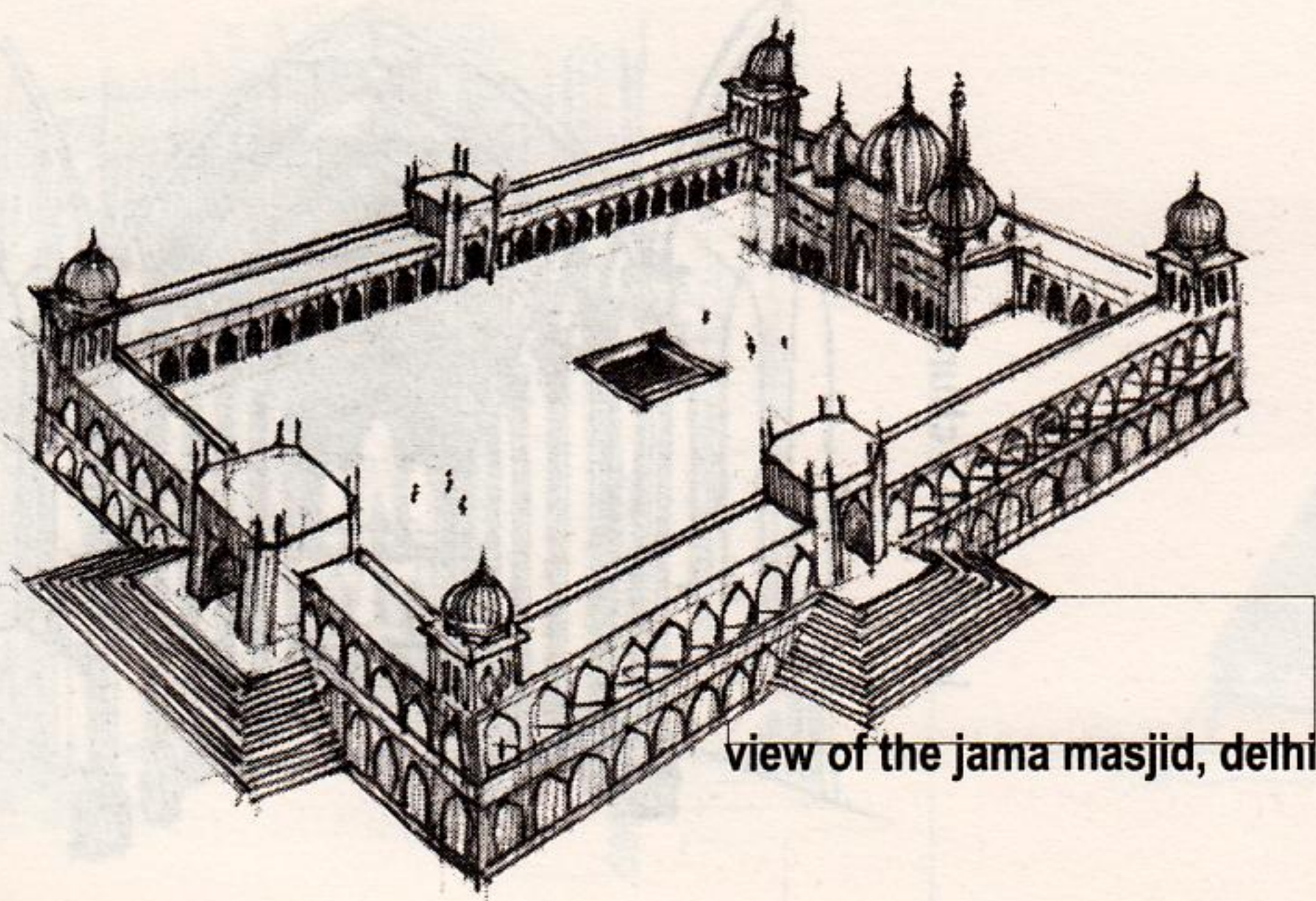
religious structures

mosques



>> mosques

A mosque is very different from both temples and churches. On the outside we can make out a mosque from its domes and minarets. Usually there is a set of three domes. One is large with two smaller ones on either side. Then there are the four minarets at the four corners. These are slim towers. It is a very symmetrical design. Inside there is usually a large courtyard. At one end there is a covered hall with many columns and a niche known as a **Mihrab**. A good example of a mosque that has all these parts is the Jumma Masjid in the city.



>> activity

objective

Understanding symbolism of the religious structures, and how they are suited to the form of worship of their congregation.

1. Let the students look at a temple, church or mosque (they can be divided into three groups). They should try to think why all three types of buildings have vertical features like minarets, shikharas and steeples.
2. Let them find out the requirements of space needed for praying at the different religious places.
3. What are the major differences in architecture between all three types.

things to think about

Can it be the desire of humans to think of soaring heights when conceiving a place of prayer?

In the temple, prayers are individual so the deity can be in a small space. The worshipper only needs to ring the bell and make his/her offerings. But there is space in the hall for other activities like group singing of bhajans, or reading of religious books. Also space is kept for pradakshina around the garbhagriha. The latter is unadorned and dark probably because the deity itself is there and there is no need to make the place any more beautiful?

Church requires a large hall where more people can pray together and hear the priest conduct the mass etc. that is why the aisled hall was planned. There are special places for the altar, choir, pulpit etc.

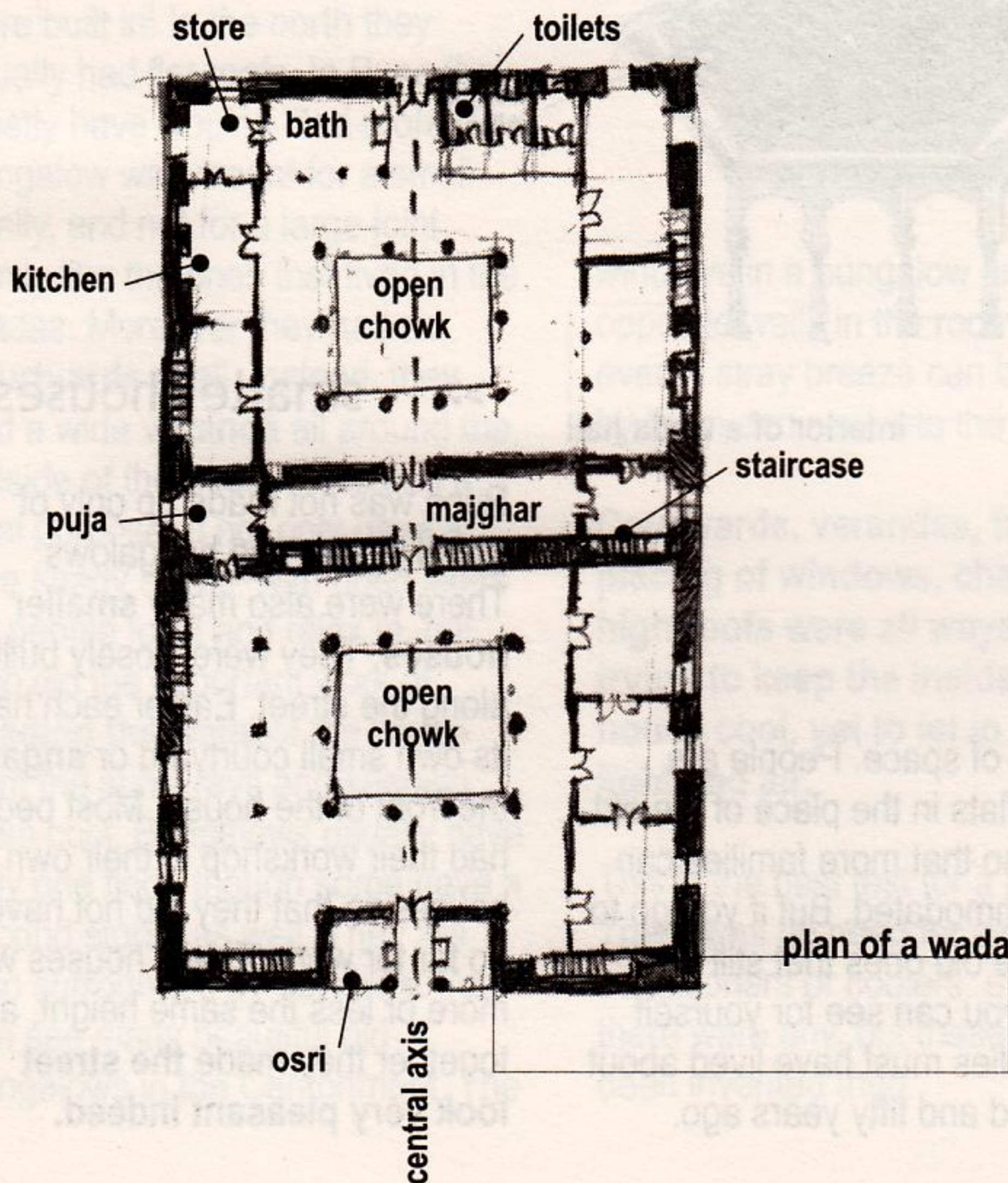
Mosque requires a larger congregation to meet, and the design of the open courtyard evolved from the climate of the Asian continent.

Temples are profusely carved on the outside, especially the shikharas. The carvings cast deep shadows throughout the day and make it look mysterious, as well as cool. The dome and minarets of the mosque are very plain without any carvings inside or out. Sometimes designs of creepers or Arabic script from the Koran, is made into ornamental design. These do not cast shadows. Churches in Pune are rather simple on the outside. Their decorative effects are created by columns, spires, towers, buttresses and statues.

In a city like Pune, most people live in flats inside tall apartment blocks. Usually there is a shortage of space inside. If they are lucky there may be a garden or compound in or nearby the apartment for children to play in. Very often there is no space at all and children have to play on the street outside their homes. On the other hand, living in a flat also has some advantages.

Have you ever thought about the houses people used to live in, in an earlier age?

In a warm climate like ours, people usually built houses with open courtyards or chowks inside. This allowed the fresh air to enter and cool the whole house. Walls were very thick too, so that they would keep the heat of the summer out. These homes were called by different names in various parts of the country. Whether big or small, most houses had some sort of courtyard.



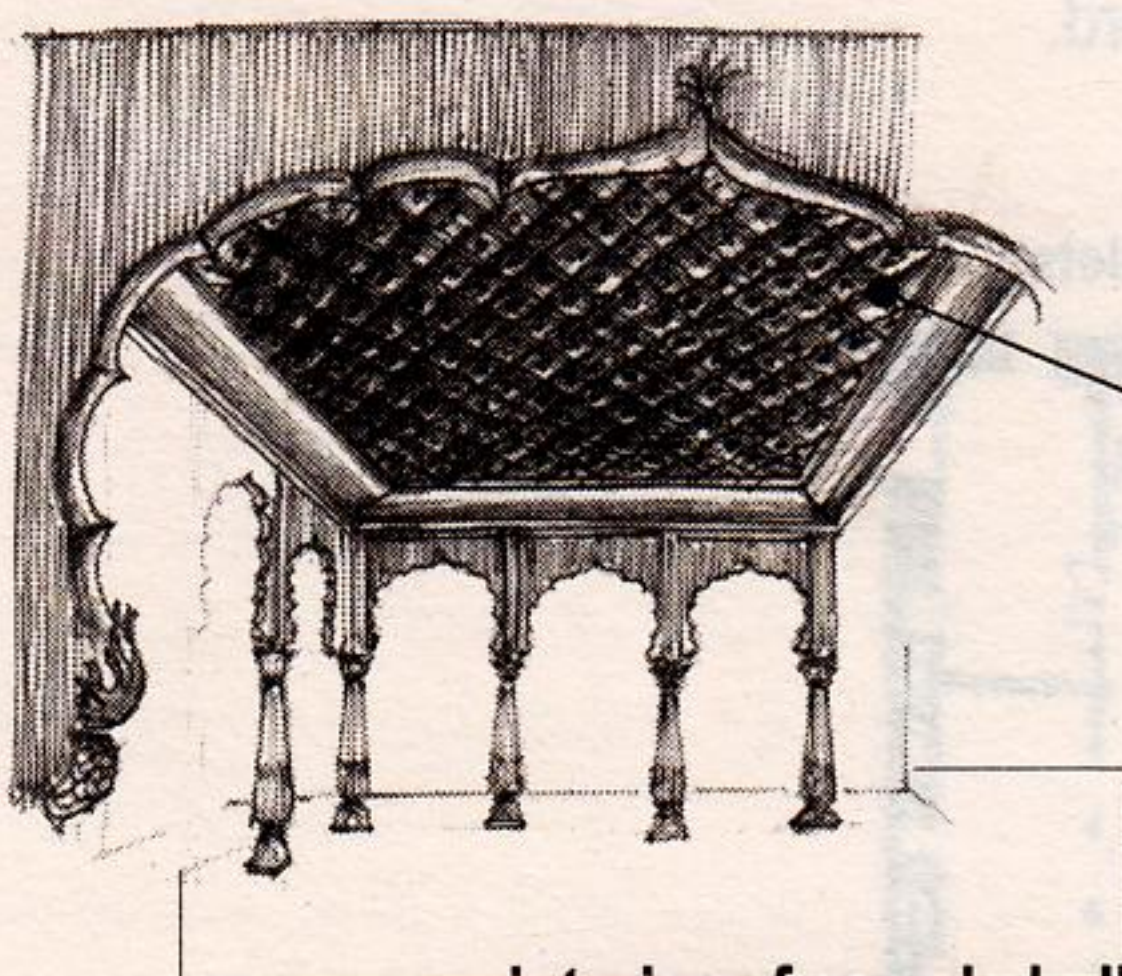
>> wadas

Haveli is a common name for such houses in North India. In Pune, such a house was known as **wada**. A wada is most interesting. It could have any number of **chowks**, sometimes as many as seven or eight have been heard of, but **the least number was two**. Around the chowk was a veranda, and beyond it were the rooms. The **doorway** was very large and impressive. But it was so heavy that people could not open it all the time. So they cut a small door on one side of the bigger one, for every day use. This is called a **dindi darwaza**. The first chowk was for offices, (for in those days people worked from home and did

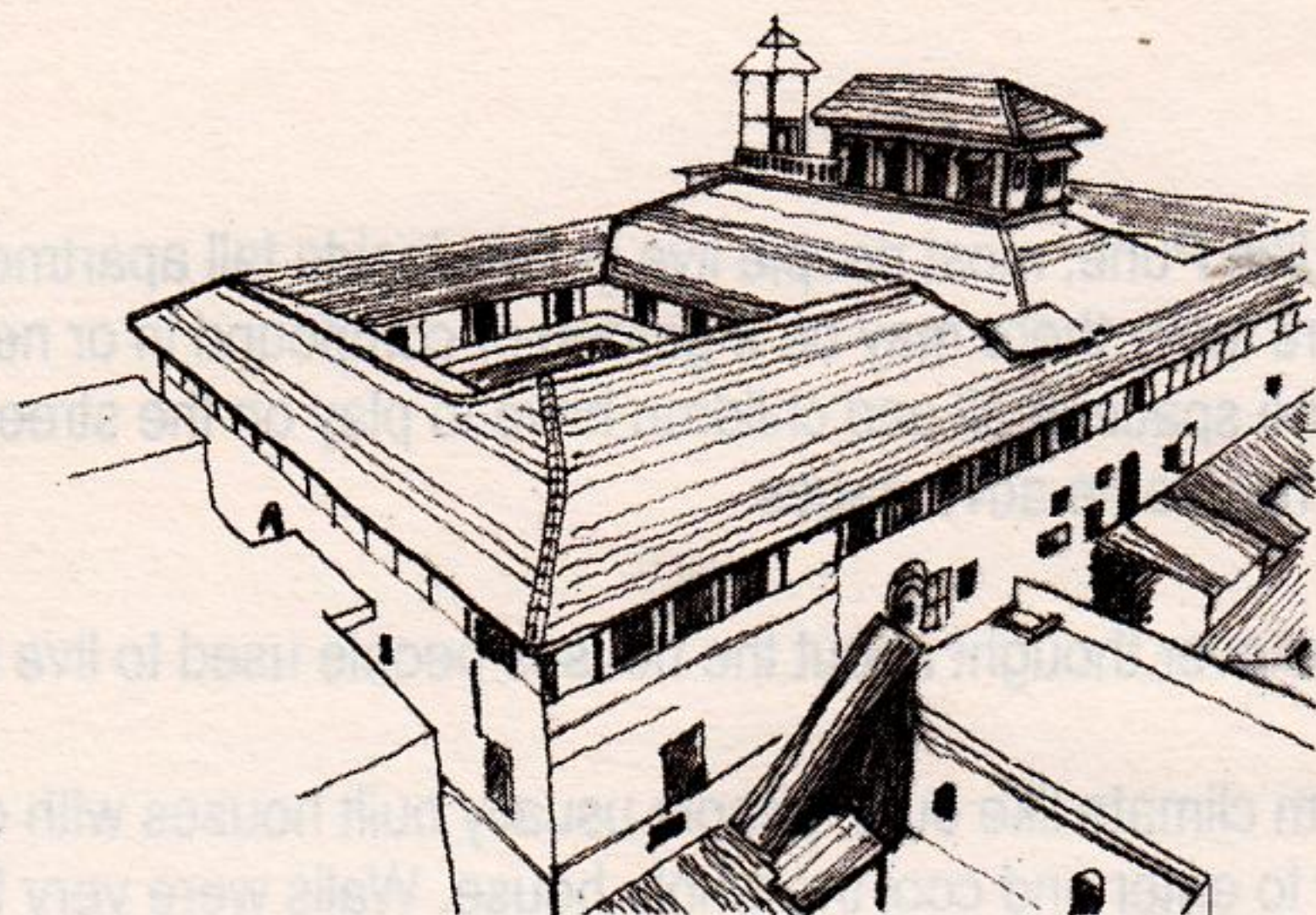
not have fixed offices to go to). Here would also be visitors' rooms. The rooms on the ground floor had very **small windows**, so that people from the street could not look into the house. The second or inner chowk had the kitchen, store rooms, Puja room, and the place where people ate. There would also be a tank, or **well**, for water here, since there were no taps or piped water then. The stairway to the top floor was always hidden inside the thick walls. Upstairs were the living rooms, which also doubled up as bedrooms.

A beautiful **Dewan Khana** for festivals and parties was also built here. When this was lit up with diyas or candles in huge chandeliers the carvings would glow in the flickering light. It was very beautiful indeed, though there was no electricity then. A child could play quite safely in the chowks with all the cousins as everyone lived together in such a house.

The Wadas made Pune a special city, and it is pity that today there are very few of the old Wadas left in Pune. This is due to the rise in population that has created a



interior of a wada hall



a wada from outside

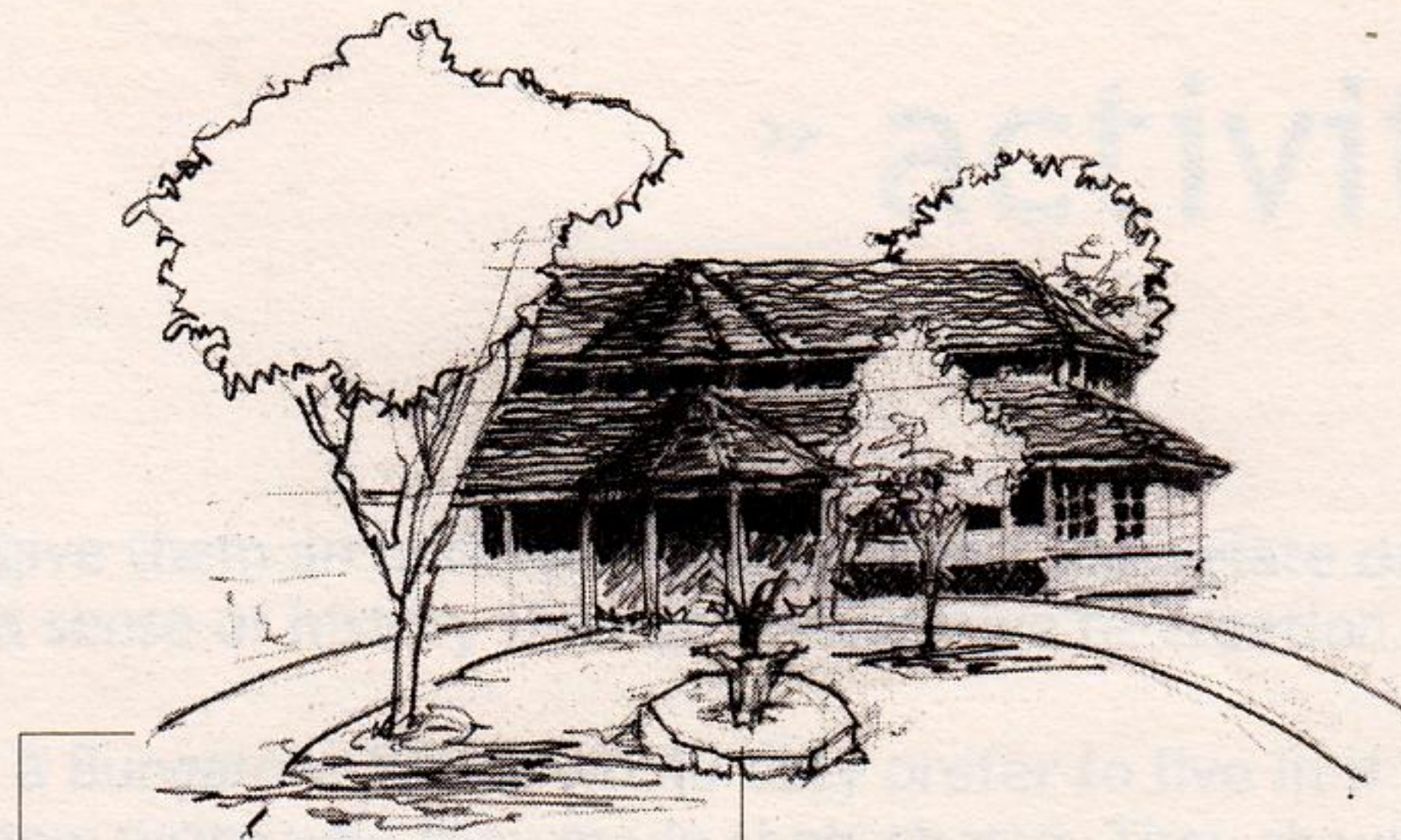
>> smaller houses

Pune was not made up only of grand wadas and bungalows. There were also many **smaller houses**. They were closely built along the street. Earlier each had its own small courtyard or **angan** in the front of the house. Most people had their workshop in their own houses so that they did not have to go far for work. These houses were more or less the same height, and together they made **the street look very pleasant indeed**.

shortage of space. People are building flats in the place of the old Wadas, so that more families can be accommodated. But if you go to any of the old ones that still remain, you can see for yourself how families must have lived about a hundred and fifty years ago.

>> bungalows

Later, about a 170 years ago, (1830's onward) the British introduced a new type of home called a bungalow. All over India, the bungalow became a very popular house to live in. They looked a little different depending on which part of the country they were built in. In the north they usually had flat roofs. In Pune they mostly have sloping tiled roofs. The bungalow was meant for a small family, and not for a large joint family like the ones that lived in the Wadas. Moreover they had **no courtyards** at all. Instead, they had a wide **veranda** all around the outside of the house. This had a dual purpose. It not only gave a nice shady space, with open sides for people to sit and relax in, but also did the important work of **shading the walls** of the house from the sun's rays and keeping them cool. Bungalows usually have only one floor, though some have a second storey as well. They are also surrounded by **gardens**. You can see many beautiful old bungalows in the Cantonment. The

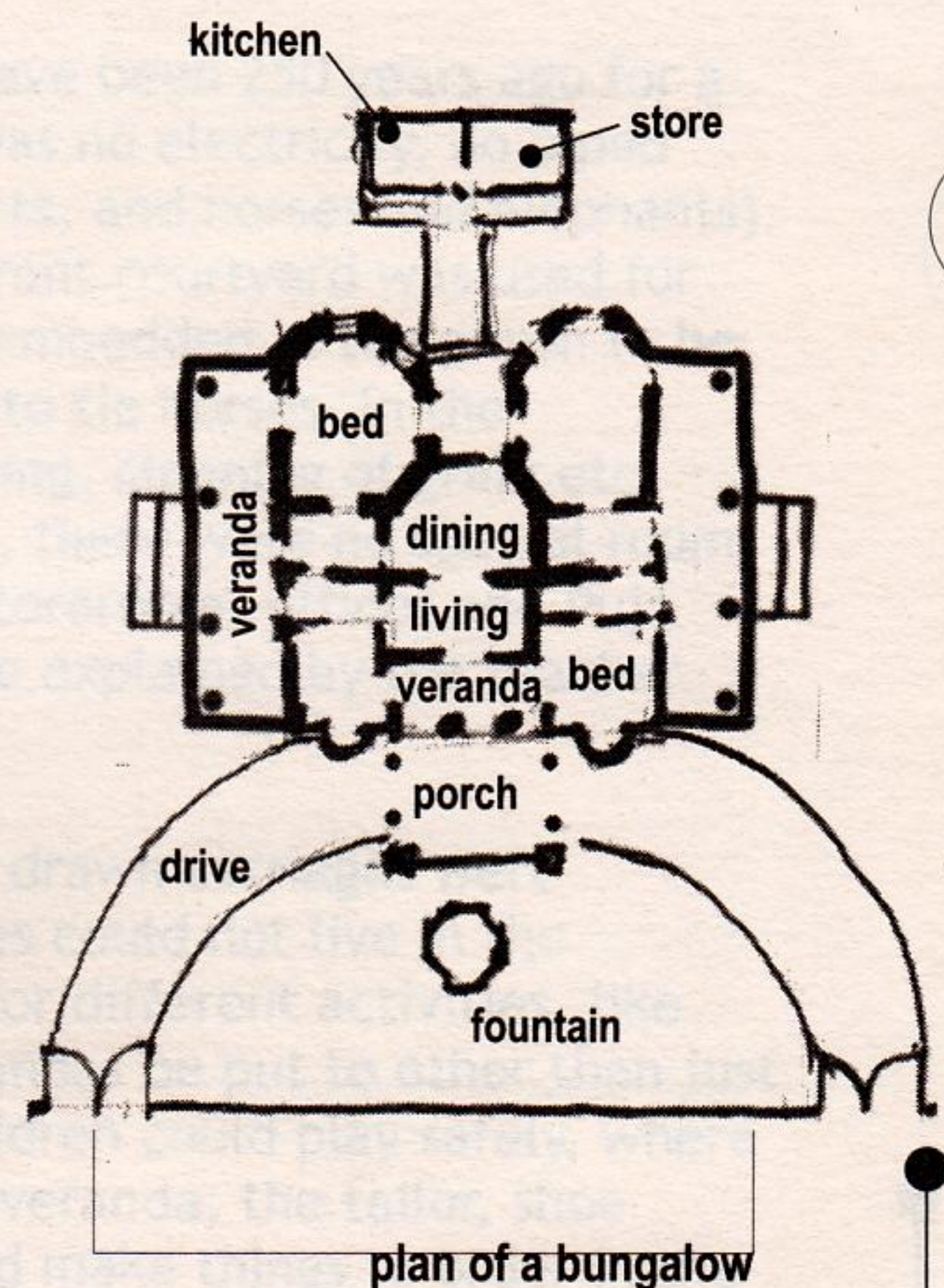


a bungalow from the outside

windows in a bungalow are put in opposite walls in the rooms, so that even a stray breeze can be caught by them and sent into the house.

Courtyards, verandas, the right placing of windows, chajjas, high roofs were all ways of trying to keep the inside of the house cool, yet to let in enough light and air.

This is the best test for a home. There was no need for air conditioners or coolers, even if there were any, but these had not been invented then.



plan of a bungalow

>> activity

objective

Stir the imagination of students : give them an understanding of plans, and relate daily life to historical periods, giving them a sense of history through imaginative re-creation.

1. Make a visit to a Wada and a Bungalow. Which would they prefer to live in if they were given a choice? Let them write why they made their choice. They should also look for different features for climate control. (skylights, thick walls, high ceilings, balconies etc.)
2. Let each one write about how they imagine life must have been 250 years ago for a child in the wada (they have to remember that there was no electricity, no piped water, no flush toilets, no transport, except bullock carts, and horses and elephants). How do they think some spaces were used here? (The front courtyard was used for office work and receiving visitors. There are still rings embedded in the plinth to be seen on the outside and frontcourt. These were meant to tie horses. In the backcourt many household duties were done, like washing, cleaning of grain etc. There were no special spaces for specific activities, i.e. there were no special rooms called bedrooms, dining rooms etc. Only the kitchen, storeroom, offices and Puja room were set aside.) The joint family system should be explained by the teacher first as these wadas were meant for such families.
3. Contrast this with the life in the bungalow, when horse drawn carriages were available. They should remember that extended families could not live in the bungalow. How was space used here? (Separate rooms for different activities, like dining, sleeping, dressing etc.) What use could the verandas be put to other than just sitting? (A space where outsiders could wait, where children could play safely, where many household tasks could be performed. In the back veranda, the tailor, shoe maker, carpenter, and other such workmen could sit and make things to order in the days before ready-made things were available, etc.)

4. Students can try to make plans of their own homes. They should try to measure the size of the rooms and draw a plan and write the length and width of the rooms along the sides. This will give them a sense of proportion too. How many "climate control" features can they find?
5. They can write a short essay on the building they love best, giving reasons/or an essay on their "dream house".
6. They can choose the street in which they live and say what they like and dislike about living there.
7. To further develop critical faculties and to articulate artistic taste, the students or the teacher can choose either two buildings of similar usage. They should however be of different designs. E.g. Two residential apartment blocks; or an old type shop and a new shop (suggested example, Poona Drug Store, M.G.Road and any newer shop on the same street) or two dissimilar looking institutional buildings. Students should compare the main architectural elements, and say which one they like. They should give reasons as to why they like it.

• change & conservation

cities have to change and grow, but should we lose all the old?
what is the importance of the old in our present lives?

>> change

Our city is constantly changing. Old houses are being pulled down and new ones are coming up in their places. New ones are thought to be more convenient. They can also accommodate more families, offices, shops etc. However if a new building is a lot higher, or completely different from its neighbours, it changes the whole look of the street. It makes the street look odd. When new buildings come up in an area, they should be of the **same height** as their older neighbours, then they might not look out of place. Often the reason for a new structure to look out of place is because the older ones make a unified front (façade). But if the modern structure conformed to the height and general look of the street, it could be a welcome addition. The very tall building would look better in another newer area of town. Municipal or city administrations make rules to restrict buildings and regulate their height.

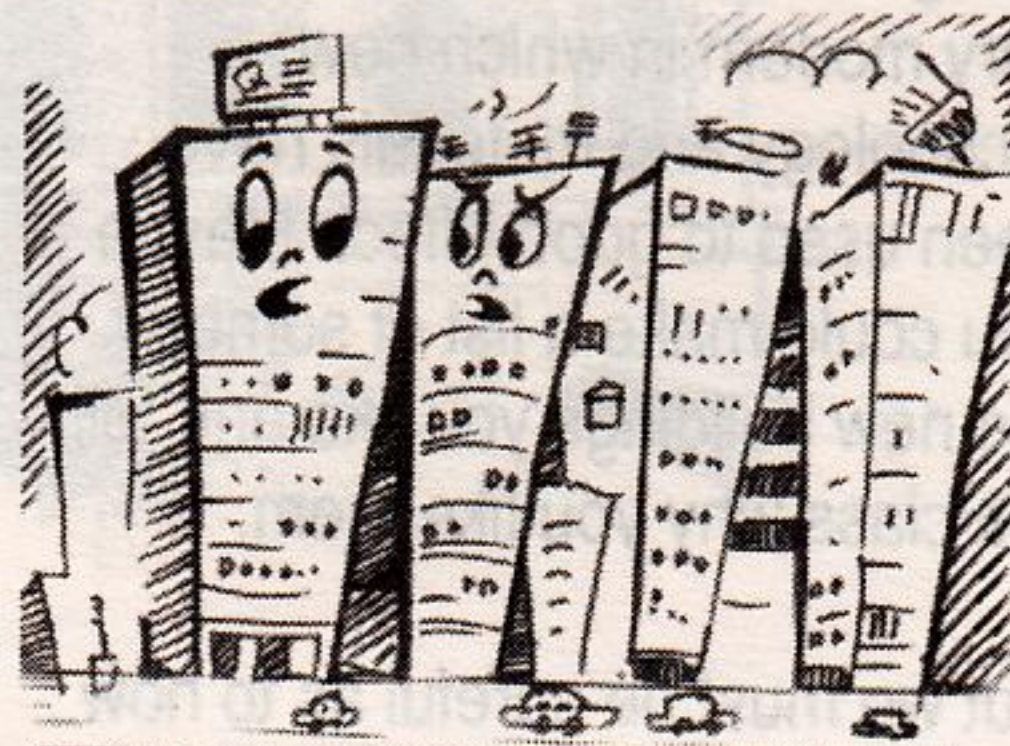
>> conservation

Though a city needs to have new structures, **we do not want to lose all our old buildings**, because each one of those has a story to tell. It speaks to us of the past. It tells us of the men and women who lived there, of the children who played there, of the sounds of laughter in happy times. If the walls could speak, what stories of love and adventure they could tell us.

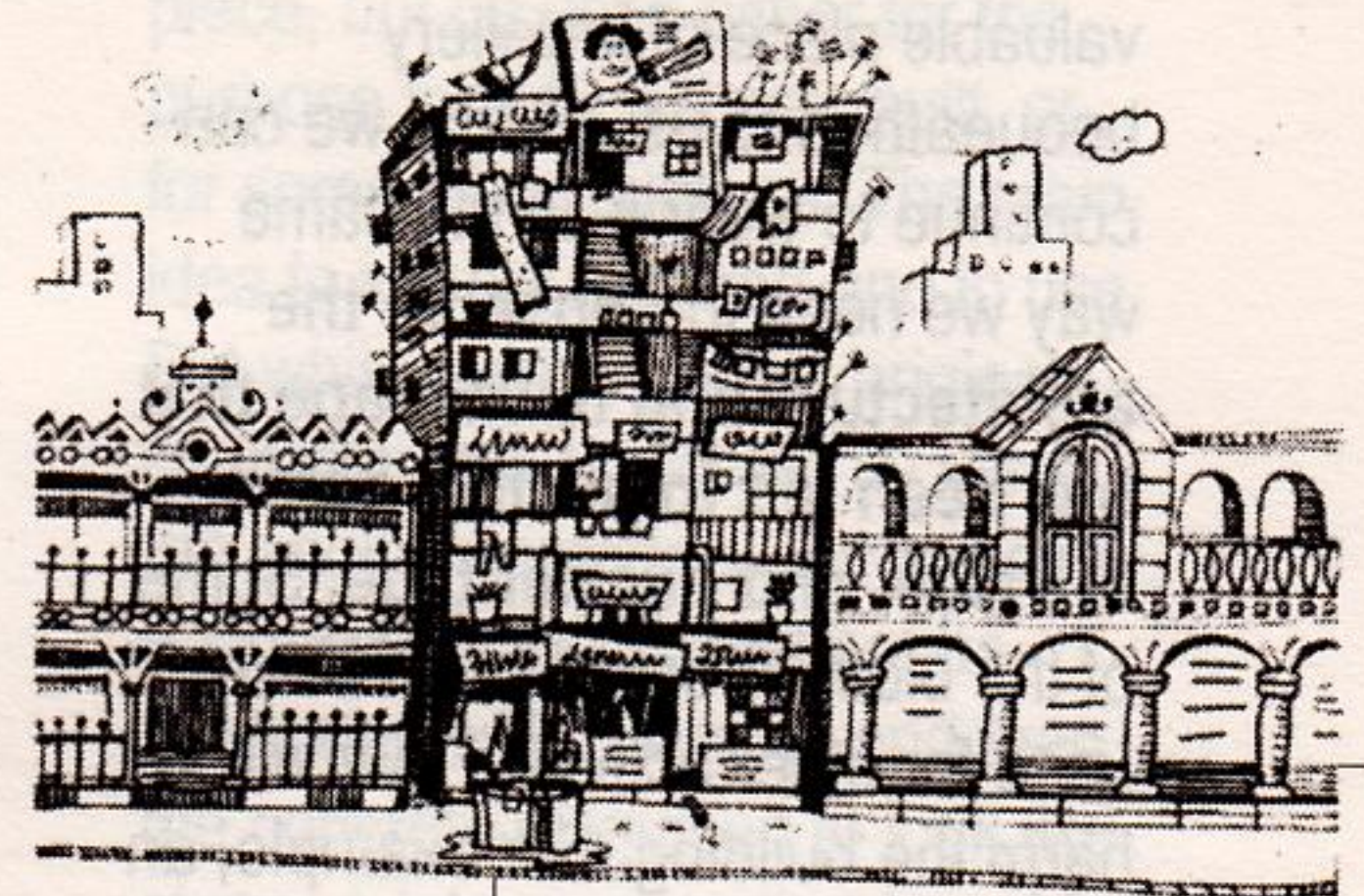


a street in old pune

"How can we go down? We will have to fly from roof tops in helicopters!"



will our entire city look like this one day?



is the new building looking out of place?

We should remember that the old architecture is what made Pune what it is. It made Pune **unique**, and different from, say, Mumbai, or Nasik, or Kolhapur. So should we not try to save some of the architecture? We have to keep it usable and in good condition, so that we will not forget the history of our city, of which we are so proud.

It seems a good policy to look after those buildings that are historically and architecturally important and keep them in good repair. They are of value to us as they were created by those who were here before us. Just as we would take care of a valuable piece of jewellery bequeathed to us, so that we can continue to wear it, in the same way we need to **conserve the architecture and townscape that has been left to us. It is a thing of value, and our heritage.** Some of the older structures can be re-used for other activities that will not harm the building. For example, an old hall or wada may be used as a community centre. This is what we call **re-cycling**. This is the concept of **conservation**.

Conservation/ reuse/ recycling often also helps to save money

and resources, as it is obviously **cheaper to repair and reuse** something than to break it down and build something totally new. Therefore conservation helps us to save expensive resources while also preserving the identity of the place.

The history of our city is written in the old buildings, and the streets, and what an interesting history that is. So next time you see an interesting old structure, try to imagine what it must have been like when it was new and in use.

>> sustainable development

We should also take a good look at some of the new buildings that are being built around us. Some are very modern in which new technology and materials have been used to good effect. Maybe you could make a list of some of the new buildings you like and tell the class why you like them.

But we must be careful as to how many higher and larger buildings

come up in a locality. We should realise that each multi-storey block means that many more families, offices, shops, and vehicles crowding into the area. Can the area take such crowding? Have the other amenities like underground water pipes, drainage/ sewers, electricity lines been increased to take the load? Is there enough parking for the extra vehicles? Should there be some restriction on how many larger structures can be built in the area?

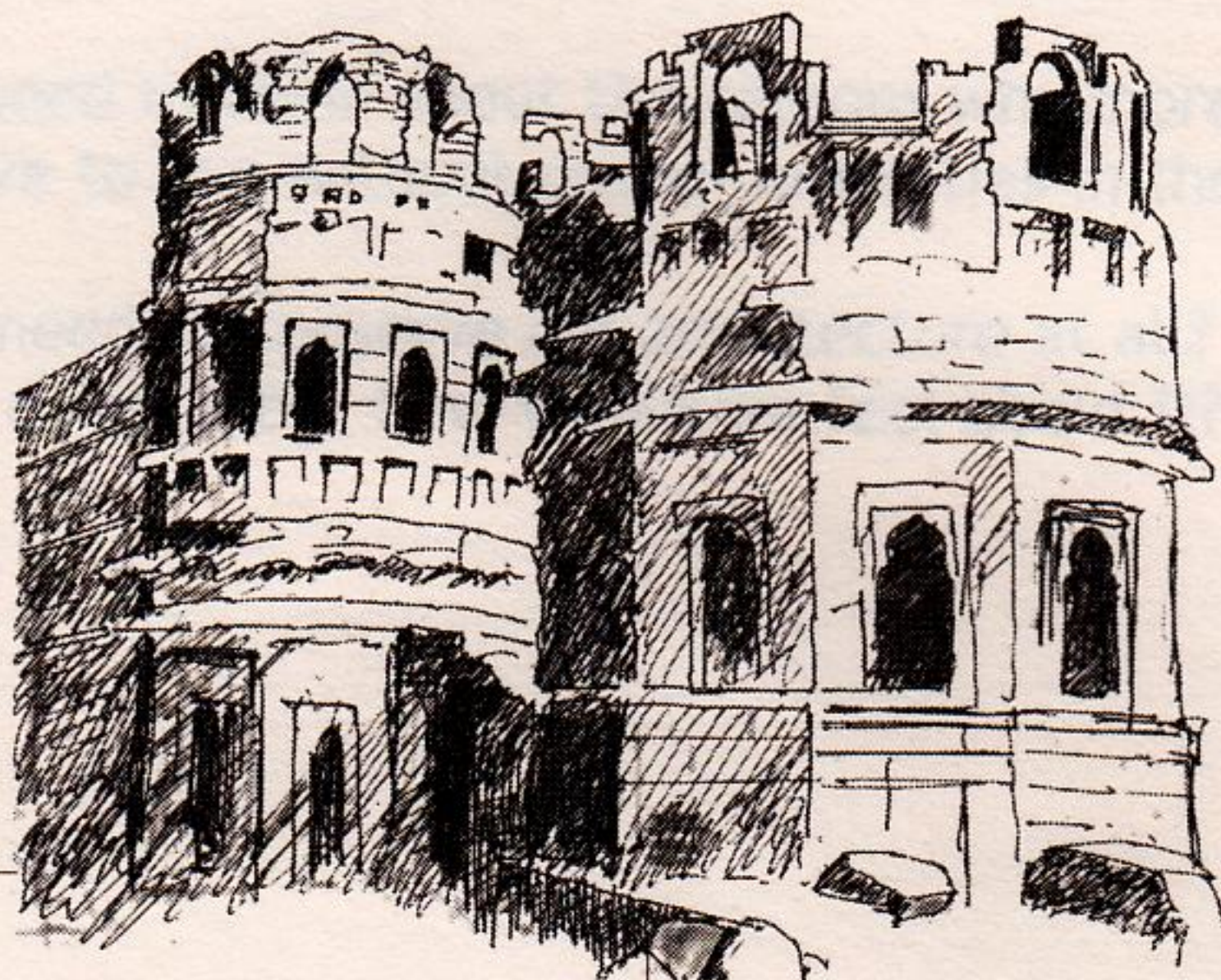
"lets make Pune modern,lets demolish this and make a multiplex here"



can we allow the shaniwar wada to be lost?

>> preservation

Preserving something just as it is. That is, not to try to rebuild or renovate. If a building is in ruin, it should be preserved from further ruin. This practice is followed for very important historical structures and usually the work is done by the Archaeological Survey of India. This concept also holds true for natural things and handmade products, for example, a lake, a tree, statues, textiles etc.



ruins of a fort, can this be preserved?

conservation means to look after / recycle / reuse

>> conservation

Conservation means to look after a building, and keep it in good repair so that it can continue to be used. It should not become a museum piece, but be used either for the purpose for which it was built, or for some other purpose. The main idea to keep it repaired and in use. But while repairing it, its original character must be restored by using the original materials. For example, a stone building should not be renovated with concrete and then the concrete disguised to look like stone. A lake or river that has dried up can be brought back to life and used for the same purpose.

>> classroom discussion

A short discussion on how much development a locality can absorb should be started here. If development is limited or restricted, what can be done to solve the problem of growing population? A lively discussion, might be generated if children are asked their views. What are their solutions to the problems of lack of parking space. Can people be encouraged to use more buses? If so, do we need to improve the bus system? How do the children come to school? Would they like to change the way they get to school?

Students need to think about the reasons why more buildings are needed. Why do so many people have to live without proper amenities in the slums?

Is there a need to conserve old architecture at all? Why? If architectural heritage is destroyed completely, how would we feel about it?

>> activity

objective

To make students aware of the changing landscape of the city, and the various problems, conveniences and inconveniences that occur with change.

1. A visit to a few modern buildings. Suggestions include the IUCAA (inside the premises of the University of Pune), any of the large housing colonies in Kothrud, NIBM complex in Kondhwa, new commercial complexes on Mahatma Gandhi Road. Students can sketch their favourite buildings and explain why they like it.
2. Mahatma Gandhi Road is a good example of how the street has changed over time, because some parts still look as they did sixty or seventy years ago, while other parts have changed completely. Students should document the change briefly and illustrate with sketches or photographs.
3. Students can themselves look for a changing street close to their home or school. Try to find old photographs and compare with a new photograph of the place, and note the changes. They should be able to identify any problems faced in the chosen area due to changes.
4. Students can meet/interview senior citizens/elders who are familiar with the area for the last few decades and find out how the place was before, and whether the interviewee misses the old landmarks and the lifestyle.
5. Students can also note the best things about some of the new buildings being built near their home. New technology and materials have been used. They could make a list of some of the new buildings they like and tell the class why they like them. May be they like them just because they look clean and new. But if they imagine how the same building will look when it is twenty or thirty years old, weather stained and a little dirty, they will realize that the heritage buildings too would look good if they are looked after.

• visit a monument

objective

To learn about the architecture of St Paul's Church through a visit.

background

St. Pauls was built in 1866. The original architect was a priest, Rev. Mr. Gell. But later the design was modified to make it more suitable for the climate. A porch was built to shelter people getting off their carriages in the rain. The narrow windows were enlarged and made into doors so that they could be opened fully to let in the air.

Style : The architectural style is Gothic, as revived in the Victorian era (nineteenth century). It is supposed to be inspired by a famous church in Paris, France, called Sainte Chapelle. The narrow pointed arches, the bell tower, the group of three windows (lancet windows), are part of the Gothic style. The rounded back end is called an apse. The thick buttresses at intervals should be noted. Gargoyles or water spouts made to look like fantastic animals at the top, are also part of the style.

The church was in a bad shape till recently. The roof used to leak badly. Streaks of water marks can still be seen on the walls inside. Peepul trees were growing out of the tower and the walls were cracking up. Many gargoyles were blocked and broken, and rain water could not drain away from the roof through them.

Conservation : Instead of changing the church, the authorities decided to restore it to its original condition with similar materials as were used before. It has recently been painstakingly restored. Masons were brought from outside Pune to carve new gargoyles, as the old ones had to be replaced. The new gargoyles are copies of the old ones.

This is an example of both restoration and conservation. The structure can continue to be in use, but though it has been repaired and a few things had to be changed for continued use, it is kept as close to the original as possible.

method

Explain to the students that the class would be visiting St Paul's church. Ask the students what they think they would be able to find out about the church building from the visit. List down each point on the board, clubbing together similar points. Evolve a basic list of things

that each student, individually or in groups would try to find out. You may need to explain how churches are used.

The list of things to observe could contain the following:

1. What materials have been used in the building? Why?
2. What seems to be the most distinguishing features of the building? Are there any unusual designs or elements? Can you identify the architectural style of the building from these features?
3. When was the church built? By whom? For whom?
4. What is the inside of the church like? The walls and columns?
5. Where does the priest sit?
6. Where does the choir sit?
7. Where is the altar?
8. Where do the congregation sit?
9. What is the shape of the back of the church?
10. What features can be said to have been put in for climatic considerations?

Tell the students that they should carry notebooks, some plain paper for drawing and pencils, erasers, pens etc.

Ask the class how they think they should behave during the visit. Help them set rules for the visit, including start and end times, forming groups or working individually, discussion towards the end of the visit etc.

during the visit

Remind the students about what they are expected to do at the site, and the rules decided upon. Check that all students have writing, drawing material and drinking water.

Let them look at their lists and try and find the information.

Give some time to draw anything the students wish to, such as a gargoyle, or the whole church exterior, or a window etc.

discussion

It would be best to hold the discussion at the church itself, so that if some aspects that the students should observe or find, are left out, they can do so.

taking the list, let the students report what they have found out.

Did they like the church building? Did they feel anything special when they visited the church? Why?

- Are there any interesting features on the outside that they have not observed before in other buildings?
- In what way do they think Pune's climate must have influenced the church design.
- What are the fanciful animal shapes (called gargoyles) jutting out of the roof? Did they observe the arches, buttresses? Why are buttresses required?
- Did any portions look newer, or recently built?

extension

- I. You could conduct a quiz either in the church compound or later on after returning to the classroom.
 - a. The church is built of bricks < true or false >
 - b. The windows have pointed arches < true or false >
 - c. The shape of the east end of the church is square <true or false >
 - d. The tall tower is known as
1) shikhara 2) minaret 3) belfry
 - e. The place where the priest stands to talk to the congregation is called a
1) pulpit 2) altar 3) mihrab
 - f. The stained glass on the window shows
1) only designs 2) just figures 3) scenes from the Bible
 - g. The porch at the front entrance was made
1) for show 2) save the entrance from rain 3) give extra space.
 - h. Match the following

seats	organ
round end	column
church	music pews
capital	apse

visit a monument

2. Ask the students to find out the meaning of new words they encounter during this activity, such as gargoyle, apse, buttress.
3. The students' drawings could be displayed on the school bulletin board with a short written account of the trip, and interesting features of the building.
4. You could plan such a visit for other buildings/ heritage sites in Pune, belonging to a different architectural style.

organising the visit

It would be useful to contact the church authorities for permissions, suitable timings, and appropriate days for the visit, as well as whether any one would be available to answer/ discuss with the students.

• suggested monuments

>> early history

- Pataleshwar Cave
- Nageshwar Temple
- A walk down Shimpi Ali or Tambat Ali at Kasba Peth

>> chhatrapati shivaji period

- Kasba Ganpati Temple,
- Lal Mahal, Kasba (recreated memorial to Shivaji's original home)

>> peshwa period

- Shaniwar Wada
- Nana Wada
- Vishrambagh Wada
- Omkareshwar Temple
- Tulshibagh Temple
- Raste Wada (with permission)

>> british period

- St Mary's Church
- St Paul's Church
- Council Hall
- Archives Building
- Central Building
- GPO
- A walk along any cantonment road, like Kahun or Napier Road, Dastur Meher Road in the Bazar,
- Shivaji Market
- University of Pune

>> modern period

- A walk down Main Street
- A walk down a part of Laxmi Road
- A visit to the IUCAA building in the University premises
- A visit to the NIBM, Kondhwa
- A walk down East Street or Deccan Gymkhana, or Fergusson College Road

>> visitor behaviour

When visiting historical monuments, we must see to it that

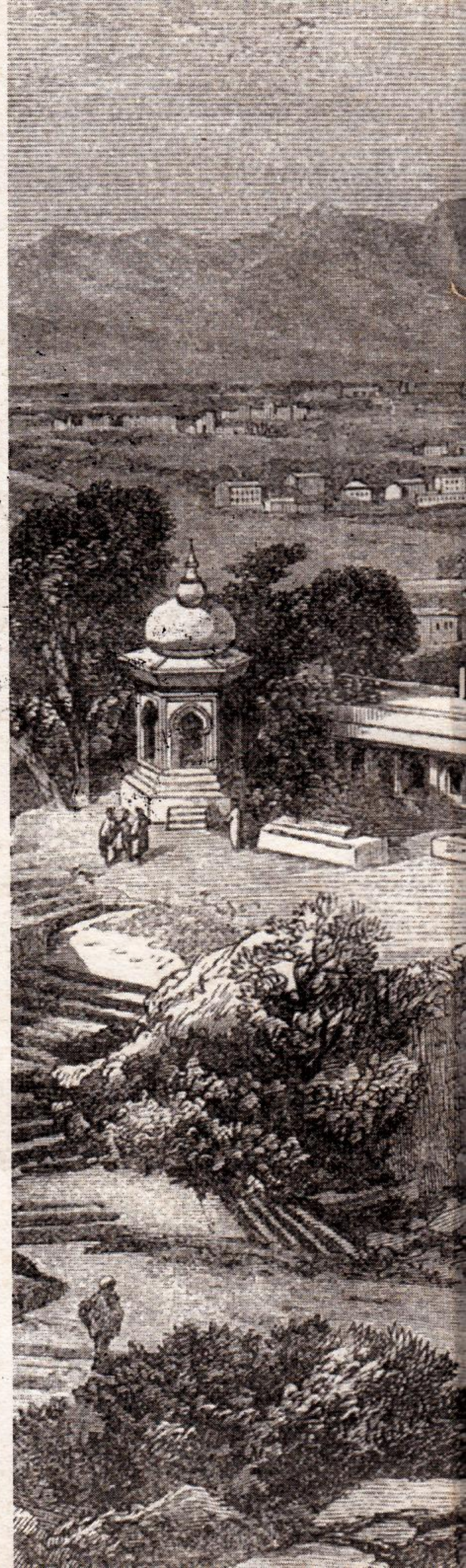
1. We do not leave behind any kind of garbage such as plastic bags, bits of food, bottles etc.
2. We must never scratch our names on walls and paintings.
3. We should talk softly and try not to disturb the environment.
4. We should not jump, touch or push things which might be damaged.



Price : Rs.40

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cover : nineteenth century etching, unknown artist, possibly view from parnakuti, looking towards the river



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